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ABSTRACT

In 1981, 12 under-achieving boys (average age 15 years) from a Sydney (Australia) inner-city Catholic school with a predominantly low socio-economic and high ethnic population were exposed to a 6-week long residential Outward Bound Bridging Course Remedial Programme. The aim of the programme was to produce significant gains in the cognitive domain, especially in language and mathematics, through an integrated programme of remedial teaching, normal schoolwork and experiences (expeditions, ropes courses, rafting) likely to influence personality in general and self concept/self-esteem in particular. The study was designed to (1) attempt to replicate in part some of the findings of the 1980 pilot programme, (2) implement more effective processes, and (3) institute a more comprehensive evaluation of the programme to more fully understand results and processes involved. A comprehensive attitudinal self-report evaluation questionnaire showed at the end of the programme students were more hopeful about their futures; positive and confident about schoolwork; happier, more co-operative and having a greater enjoyment of learning. Ten appendices contain an outline of 1980 pilot programme, student profiles, summary of changes and correlations, achievement test results, Bridging Course evaluation questionnaire, Coopersmith Self-Esteem Inventory results, results of a high school personality questionnaire, programme information, students' comments, and a 140-item bibliography. (ERB)

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OUTWARD BOUND BRIDGING COURSE 1981

An Investigation and Evaluation of an Outward Bound Remedial Programme

(Unlocking achievement ability through experiential education.)

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1981

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OUTWARD BOUND BRIDGING COURSE. 1981

An Investigation and Evaluation of an Outward Bound Remedial Programme

(Unlocking achievement ability through experiential education.)

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ABSTRACT:

Twelve under-achieving boys (average age 15 yrs, 3 months) from a Sydney inner-city Catholic school with a predominantly low socio-economic and high ethnic population were exposed to a six week long residential Outward Bound Remedial Course.

The low reading and mathematics abilities tested by the Gapadol Reading Comprehension and Schonell Graded Word Reading Tests and the Moreton Mathematics Test - level III showed very significant improvements during the programme. The results were found to be essentially similar to those of a pilot programme conducted one year earlier.

The integrated remedial experiential nature of the programme was found to have produced significant personality changes (as measured by the High School Personality Questionnaire) with consistent and significant increases in the Factor B (intelligence) scale of this instrument.

Administrations of the Coopersmith Self-Esteem Inventory showed these students to be low in self-esteem (and particularly on the Home/Parents and School/Academic subscales) and also showed positive correlations between low S-E and achievement (especially reading). At the end of the course self-esteem had risen significantly and correlations between S-E and reading were not found.

A comprehensive attitudinal self-report evaluation questionnaire showed that at the end of the programme students were much more hopeful about their futures, positive and confident about schoolwork, happier, more co-operative and having a greater enjoyment of learning.

The investigation is approached using both psychometric and case study approaches and it comments on some of the key issues of individuality and the relationship between I.Q., S-E, personality, achievement and experience in the remedial setting.

The study raises a number of questions concerning the most effective remedial processes for individual students while at the same time establishing the Outward Bound Bridging Course approach to remedial education as highly effective in both the cognitive and affective domains.

OUTWARD BOUND BRIDGING COURSE. 1981

Investigation and Evaluation of an Outward Bound Remedial Programme

(Unlocking achievement ability through experiential education.)

GENERAL INTRODUCTION:

Outward Bound is a non-profit independent educational organisation which began in Australia in 1956. It is one of 35 autonomous Outward Bound Schools throughout the world.

Outward Bound began in 1941 in Britain through the observations of Dr Kurt Hahn (at that time founder & headmaster of Gordonstoun) and Laurence Holt of the Blue Funnel Shipping Line that young seamen were not surviving the experiences of having their ships sunk by German U-boats in the Atlantic whereas the older men under the same conditions did survive.

A month long intensive experience was devised to impel young men into demanding experiences that would extend their abilities and most importantly give them real insights into their own abilities, resources and potential.

No survival training as such was incorporated but by the end of the war the programme had proven so successful that Outward Bound began spreading throughout the world as a significant complementary form of education preparing young people to meet the increasingly complex demands of modern life.

Outward Bound has developed from the traditional month long course for 17-25 year olds into a wide range of programmes. Adaption and extension of the impacts of Outward Bound have been particularly marked in Northern America and also in Australia.

In Australia specialised programmes for the intellectually handicapped, children aged 12-16, standard courses (17-30 yrs), adult courses (30+), teachers courses, and school and college academic and experiential programmes, as well as a range of special programmes for other organisations illustrate the breadth and effect of Outward Bound approaches.

The main objectives of Outward Bound concern the maximised development of each individual person. Consequently it is a concept appropriate to all persons - no less for those who have handicaps and difficulties than for those for whom the world grants easier success.

A growing body of evidence*(1) (see for example, Fletcher, 1971, Godfrey, 1974, and Shore, 1977) has helped to provide a firmer base for understanding the Outward Bound process and has given increasing confidence to Outward Bound to enter such specific areas as this Bridging Course Remedial Programme.

The 1980 Pilot Bridging Programme (see appendix I) gave indication of the potential of programmes of this type.

The new environment on this special Outward Bound course, coupled with a different social climate, demands for new attitudinal direction and need for self reliance seemed to compel a change in outlook and an adjustment. Such changed outlooks and adjustments seemed then to become the initial energy force and catalyst for further growth and change.

As this change seemed to be in the direction of identity and self concept clarification and consolidation and as these changes had marked potential for providing a firmer and more positive base for the learning and development of remedial students, a more comprehensive investigation of both process and outcomes seemed warranted. This led to the conduct of the 1981 Bridging Course and to this evaluation.

---

* 1) Note:

Most of the Outward Bound research has been carried out in the North American schools. Whilst there are differences in methodology and some differences in philosophic interpretation the similarities between Outward Bound Schools, especially between American and Australasian schools is far more significant than the differences. Consequently overseas research provides some useful background to the interpretation and analysis of Outward Bound processes and effects in Australia. Direct conclusions however cannot be drawn and some careful interpretation is required of overseas results when comparing to Australian results.

Outward Bound Bridging Course - 1981

INTRODUCTION TO THE BRIDGING PROGRAMME

In 1980 a pilot programme of 14 year 9 high school boys was conducted by Outward Bound in North Queensland. The eight week programme included remedial and normal school subject work with outdocr activities and expeditions (See appendix I(b) & (c)).

The programme followed an integrated approach for total individual development. Some pre and post experience achievement tests were administered and produced significant results (see appendix I, (a)).

The current study was designed to a) attempt to replicate in part some of the findings of this pilot programme, b) implement more effective processes; and c) institute a more comprehensive evaluation of the programme in order to more fully understand the results and the processes involved.

The aim of the Outward Bound Bridging Course (hereinafter referred to as O.B.B.C.) stated in its simplest form was to attempt to produce significant gains in the cognitive domain, especially in language and mathematics, through an integrated programme of remedial teaching, normal schoolwork and experiences likely to influence personality in general and self-concept/self-esteem in particular.

It was hypothesised that this integrated approach operating in accordance with Outward Bound philosophy and practice would produce positive changes in achievement for boys who were underachieving.

Should these changes occur it was intended to attempt to find some of the possible causal or associative relationships between intervention procedures and the results.

One of the assumptions underlying the investigation is that Self-Concept (S-C) and particularly Self-Esteem (S-E) may have significant effects on learning. [For this reason the Coopersmith Self-Esteem Inventory (C.S.E.I.) (Coopersmith, 1967) has been used as a major instrument in this study.]

Although there has been extensive research in this area uncertainties remain.

Some theorists and researchers place the self as central in learning.

Staines (1963, p.80) for example concludes that "the self facilitates or inhibits learning", while Combs & Snygg (1959, p. 131) suggest "the very existence of the individual's need to maintain self imposes a selective effect on his perceptions".

Despite the range of research (e.g. Wylie 1961 & 1974, Bledsoe 1967, Ludwig & Maehr 1967) the data is not unanimous in its conclusions (West, Fish & Stevens, 1980).

There is however a good deal of research which supports the notion of a positive correlation between S-C & S-E and achievement.

The Brookover studies for example have consistently found that positive S-C and high S-E results in higher achievement and negative feelings correlate with low achievement (Brookover, Patterson & Thomas, 1964). This relationship appears to stand even where IQ is statistically controlled (Brookover, Erickson and Joiner, 1964).

It seems not unreasonable to find that researchers find it comparatively easy to find a positive relationship between low self-concept and low achievement (e.g. Coopersmith and Feldman 1974 and Davidson & Greenberg 1967). However educational "commitment" on the part of some educators often transforms associative relationships between self-concept and academic achievement to causative relationships which may put to test good principles of causal inference.

Statements such as "the Research literature is filled with reports indicating that cognitive learning increases when self-concept increases" (Canfield & Wells, 1976, p.7) is misleading if not erroneous. (There is an increasing body of research for example that suggests that academic achievement is causally predominant over self-concept of ability (Calsyn & Kenny, 1977) - Coopersmith balances the question by declaring that "we are not in a position to determine whether the conditions we find associated with self-esteem are antecedents, consequences, or correlates" (Coopersmith, 1967, p.17).)

However, with a little more caution, it can be said that from the evidence "There is a persistent and significant relationship between the self-concept and academic achievement" (Purkey, 1970, p.27).

This type of conclusion has come not only from major reviewers like Purkey (and Wylie, 1961 & 1974) but also by researchers who have found remarkable consistency in their results. West, Fish & Stevens for example found the correlations between general self-concept and achievement to range between +.18 and +.50,and Coopersmith (1967) found self-esteem and achievement to correlate +.30.

There is some evidence to suggest that the S-E/achievement relationship strengthens with age during adolescence, (Rubin, 1978). This would appear to bode ill for intervention.

Once established self-esteem becomes a pro-active factor in the perception of the individual to varying degrees. This underpins an essential stability which makes self-esteem resistant to change.

It has been pointed out that "in an area in which such strong commitments exist, it seems unusual that few investigations involve attempts to modify self-concept & ascertain possible effects on achievement later, or to modify achievement and ascertain effects on general self-concept later" (West, Fish & Stevens, 1980).

Contrary to this general statement the areas of self-concept and self-esteem have been the largest single areas of research in Outward Bound. Although the investigations have encountered most of the difficulties possible of research design and measurement the overall trend clearly indicates that Outward Bound programmes and techniques have at least some associative relationship with participant's levels of self-concept and self-esteem.

While some researchers have used control groups (e.g. Fornander, 1974), most have not. All studies report either increased S-C or S-E.

From the earliest studies in England (e.g. Carpenter, 1958) and the U.S. (e.g. Richards ,1966 and Clifford and Clifford, 1967) growth in areas of self has been a major finding. Some investigators have employed follow up studies and have found significant differences remain at 3 months (Nye, 1975), 4½ months (Winkie ,1976), 6 months (Wetmore, 1972) and one year (Heaps and Thorstensen ,1972). Studies have been made in adaptive programmes with schools (e.g. Copp, Pierson & Sargent,1972, Fersch and Smith, 1972 and Stimpson & Pedersen,1970) and in guidance and counselling settings (e.g. Lovett, 1971) as well as with Outward Bound standard courses (e.g. Smith et al, 1975, and Koepke, 1973).

Unfortunately there is no evidence of investigations of Outward Bound programmes and their effectiveness in increasing achievement in cognitive areas such as mathematics or reading nor are there clear analyses of the outcomes of the increased self-concepts and self-esteems reported.

This study may open some new areas for investigation in this field.

In keeping with the growth of interest in the self there has been a growing interest in the relationship between self and cognitive areas.

Reading has come under investigation in this regard and significant relationships have been generally found between self-concept and reading (e.g. Bodwin, 1957 and Williams and Cole, 1968).

Causal relationships however are still difficult to define. Wattenberg & Clifford (1962) and Lamy (1965) have both found that early measures of self-concept are predictive of later reading ages. Lamy found that such predictions were as good as if not better than I.Q. predictions and suggested that the self perceptions were causal to later reading ability.

Purkey (1970) however found in his review of studies that poor readers hold negative attitudes which suggests that achievement has the predominant causality.

In mathematics achievement S-C has also been found to be significant (e.g. Primavera, Simon & Primavera, 1974, Williams and Cole, 1968). There is some evidence to suggest this relationship may decline over time (Bodwin,1957, for example reports immature self-concept/arithmetic ability at grade III r = .78, grade 6 = .68). The problem of causality however remains, typified by Hamachek's conclusion (1978, p. 217) that "Persons who tend to have a low sense of personal worth, high anxiety, low S-C and introversion have more problems in mathematics".

Inherent, however, in Hamachek's statement is an indication that evaluation of S-C or S-E alone is insufficient. There are obviously a whole range of personality and ability factors which form the bed from whence springs achievement.

It was for this reason that a personality measure (the High School Personality Questionnaire - (H.S.P.Q.) - Cattell and Cattell, 1975) was included in this study.

Unfortunately where results of the relationship between personality factors and achievement have not proven elusive or indeterminate (e.g. Behrens & Vernon, 1978) they have proven complex (Elliot, 1972).

It may be for these reasons that studies of Outward Bound and similar programmes attempting to use personality inventories have produced mixed results.

Although few investigations have used the H.S.P.Q. or had subjects of the age for the H.S.P.Q. its related inventory (see appendix VII for discussion) the Sixteen Personality Factor Questionnaire (16PF), (Cattell and Eber, 1962) has been used a number of times in this field. A study of boy scouts programmes produced no significant results (Johnson, 1972) while a study of Outward Bound (including a control group) (Smith, 1972) found positive self thoughts but no long lasting significant differences in the follow up on the 16PF.

Hendy (1975) in Canada, however did find significant changes on some 16PF factors and significant differences persisted at the 6 month follow up. In 1966, Strutt had used the 16PF for an analysis of personality changes of girls following an Outward Bound course in Wales and found significant differences on some factors from the control group on a 19 month follow up.

Keay (1970), found that of the 16PF factors he tested in N.Z. Outward Bound that significant changes took place compared to a control group and persisted at the two month follow up. Jicklings (1977) study also found significant changes on certain factors.

On a 16-28 month follow up of an Outward Bound modelled programme for emotionally disturbed students, Adams (1970) also found significant changes persisted on some factors.

Naches and Roberts (1967) use of the H.S.P.Q. confirmed the potential usefulness of this form of instrument in finding significant differences on certain factors. They also found that the most significant differences were with potential school drop outs and so their findings are particularly interesting for this study.

A more elusive area of our understanding of learning and development is the effect of student attitudes. While many hypotheses have been postulated on the pre-determinants of attitudes (e.g. self-concept - Williams & Cole, 1968) it is difficult to evaluate the effects of changing experiences on attitudes.

The importance of experience in both prompting questions such as "Who am I", "What can I do", and finding answers to these questions, is being given increasing recognition (eg. Bassett, Watts & Nurcombe, 1978).

Attitude change however can be so experientially specific that for this study a specially designed evaluation questionnaire was employed to attempt to assess the effect of the O.B.B.C. on the attitudes of the students.

SUBJECTS:

The twelve students came from an inner-city boys' catholic school in Sydney (sixty-five per cent migrant families with a total of 54 different nationalities represented). Five students were attending E.S.L. (English as second language) classes. Although predominantly from low socio-economic backgrounds, all had strong parental support. Many researchers have found that children from disadvantaged and low socio-economic backgrounds reflect in both behaviour and learning the negative image society holds for them (e.g. Berry, 1974) and others illustrate the significance of language problems for migrant children (e.g. Vasta 1979 & Evans & Poole, 1975). However, in general, the conclusion reached has been that there are only minor correlations between social class and self-esteem (see for example: Coopersmith 1967, pp82-83). The Coopersmith Self Esteem Inventory has been found to have a correlation with Socio-economic status of +.19 (Rubin, Dorle & Sandidge, 1977).

Pre-O.B.B.C. evaluations for selection included students' reading levels as per tests administered late 1980; intelligence test results; background and interests; language skills, especially vocabulary, comprehension, study skills and word analysis skills; physical, mental, social and emotional problems; learning modalities and any specific learning difficulties.

More detailed student profiles are presented in Appendix II by age; nationality; grade; reading age according to the Schonell R1 and Gapadol reading comprehension; maths achievement level according to the Moreton Maths test; family background; and teachers' comments.

Subjects at Commencement of Course. TABLE A

	Range yrs/mths	Mean yrs/mths	Standard deviation yrs/mths
Chronological age	14.3 - 16.3	15.3	
Reading Age* - Gapadol	7.9 - 16.11@	11.83	2.87
- Schonell	7.3 - 14.5	10.74	2.1
Maths Moreton	9.0 - 12.0	9.97	0.11

@ excluding John, upper range would be 15.1.

Note Pearson product-moment correlation co-efficient between Gapadol and Schonell was calculated at 0.92.

It has become acceptable to emphasise early experience and early remediation as being most significant in ensuring optimum learning development in children, partly because self concept of ability and self esteem become more stable with age (e.g. Rubin, 1978). However there is evidence (Jacks & Keller, 1978) to suggest that if humanistic and integrated approaches are employed then "later" intensive efforts may even have some advantages. The Stanford Research Institute report "Compensatory Education and Early Adolescence", (1974) links retardation of learning in many cases to maturation. It concludes that intensive educational experiences with older students are at least as effective as early intervention as a result of accelerated rates of cognitive development experienced by some adolescents. (There is evidence from other Outward Bound research (e.g. Schroeder and Lee, 1967) which also supports this view).

All subjects were boys and although scores on self-esteem generally are not significantly different by sex (e.g. Table 11, Appendix VI) there is, however, a significantly stronger relationship between self-concept and achievement in boys than in girls (Campbell, 1965; Bledsoe, 1967; Canfield and Wells, 1976; Purkey, 1970), especially for male underachievers.

All of these research findings were considered in choosing these male students as having greater remedial potential. Results should be evaluated in this light.

THE BRIDGING PROGRAMME:

During the 6 week programme (for details see appendix VIII) the educational approach adopted encompassed the education of the total individual - in the cognitive, affective, social and physical domains.

The experiences encountered were practical and real. The communications patterns needed to be pragmatic and effective (a style shown to be necessary with migrant children, Evans & Poole, 1975).

Living under these conditions required considerable adaption and self-reliance and the need to work in a small group in a different environment. All of these factors have been shown to be effective in increasing positive self-concepts, learning and development.

Payne, Drummond and Lunghi (1970) for example have shown the effectiveness of adventurous expeditions on self-concept, while Duke & Perry (1978) in reviewing Outward Bound approaches in educational systems found that the characteristics of the programmes which gained positive results included small size of group, students given adult responsibilities and the need for self-reliance and a meaningful outdoor experience style.

There is also some evidence that just removing students from the normal environment where they are identified as "special" may lead to increased self-concept (Rosenberg and Gaier, 1977). However, simply providing an alternative form of learning has no particular effect (Klass & Hodge, 1978) in itself instead it appears that the quality and nature of the new learning environment are specifically important.

The learning climate on the Bridging Programme was essentially identical to those described by Fry & Coe (1980) with absence of competition, considerable task orientation and a high degree of teacher support and involvement shown as leading to increased student motivations, desire for self improvement, increased enjoyment of learning (c.f. results in appendix V) and increased academic success (c.f. results in appendix IV).

Such procedures with their consonant results have been verified by other studies of Outward Bound programmes and have been shown to have particular significance for potential school drop outs and underachievers (e.g. Naches & Roberts, 1967).

The generally supportive co-operative social climate of the Bridging Programme has also been shown by other researchers (e.g. Ludwig and Maehr, 1967) to improve self ratings and increase the desire to continue with tasks.

The graduated demands of the programme from early ropes confidence course type activities, independent living skills such as cooking and introductory expedition skills ensured that students could move through the seemingly difficult or impossible and the unfamiliar to success. Such processes in building up success experiences and feelings of adequacy have been shown to be significant in overcoming low self-esteem which is inhibiting learning (Maw and Maw, 1970).

Throughout the programme the approaches taken and techniques employed were designed to ensure that there were increased opportunities for initiative and self responsibility and for students to discover that "learning" is not an issue confined to the classroom but can be a part of their everyday experience and can be both challenging and satisfying.

Schroeder and Lee's (1967) study typifies some of the results likely out of such an approach. Their study of 40 non achieving school students on an Outward Bound programme found that at the conclusion of the programme the students perceived themselves as more active, more positive and less alienated. They regarded others more as individuals and peers and teachers as more positive and helpful. They exemplified more mature goal orientations and had greater flexibility of means for goal achievement. (Compare similar results presented in appendix V).

The details of implementation of the concepts and practices were carefully controlled. The following brief summary of teaching methods and materials (in conjunction with appendix VIII) will provide some insight into the operation of the programme.

Materials were chosen according to interest levels and reading age range of the group. The selected materials started just below the lowest achiever's level with progressively more challenge until some materials extended the highest achiever in the group. Within this range, a balance was found in which the material was both readable and interesting. For a more detailed account on some of the teaching and resource materials used refer to appendix VIII.

An innovative approach was taken in some of the materials used. The programme outline shows the sessions as learning games or learning activities. These periods included innovative educational games especially designed by the staff to cater for the interests and abilities of the boys in the group. These activities stretched the students' cognitive facilities and encouraged them to participate in intellectually stimulating activities. The students joined in these activities enthusiastically and showed creativity in developing extensions to the english and maths games. The objectives of the different activities provided for the range of abilities and allowed for the weaker members to achieve good results and a sense of success.

The teaching principles employed included:

(1) diagnosing student's needs and problems and planning instruction to meet those needs.

(2) commencing at a level slightly below the student's ability thus enabling him to feel some success experiences.

(3) building on individual strengths and working on weaknesses.

(4) teaching skills which are specific and can be measured.

(5) continually assessing the student's performance and progress.

(6) establishing priorities.

(7) stating tasks clearly.

(8) stating criteria used to judge performance.

(9) adopting positive methods and being directive in approach.

(10) keeping a log of the different teaching activities and students' progress.

(11) showing the student how to chart his own progress so he has a clear indication of his own rate of success.

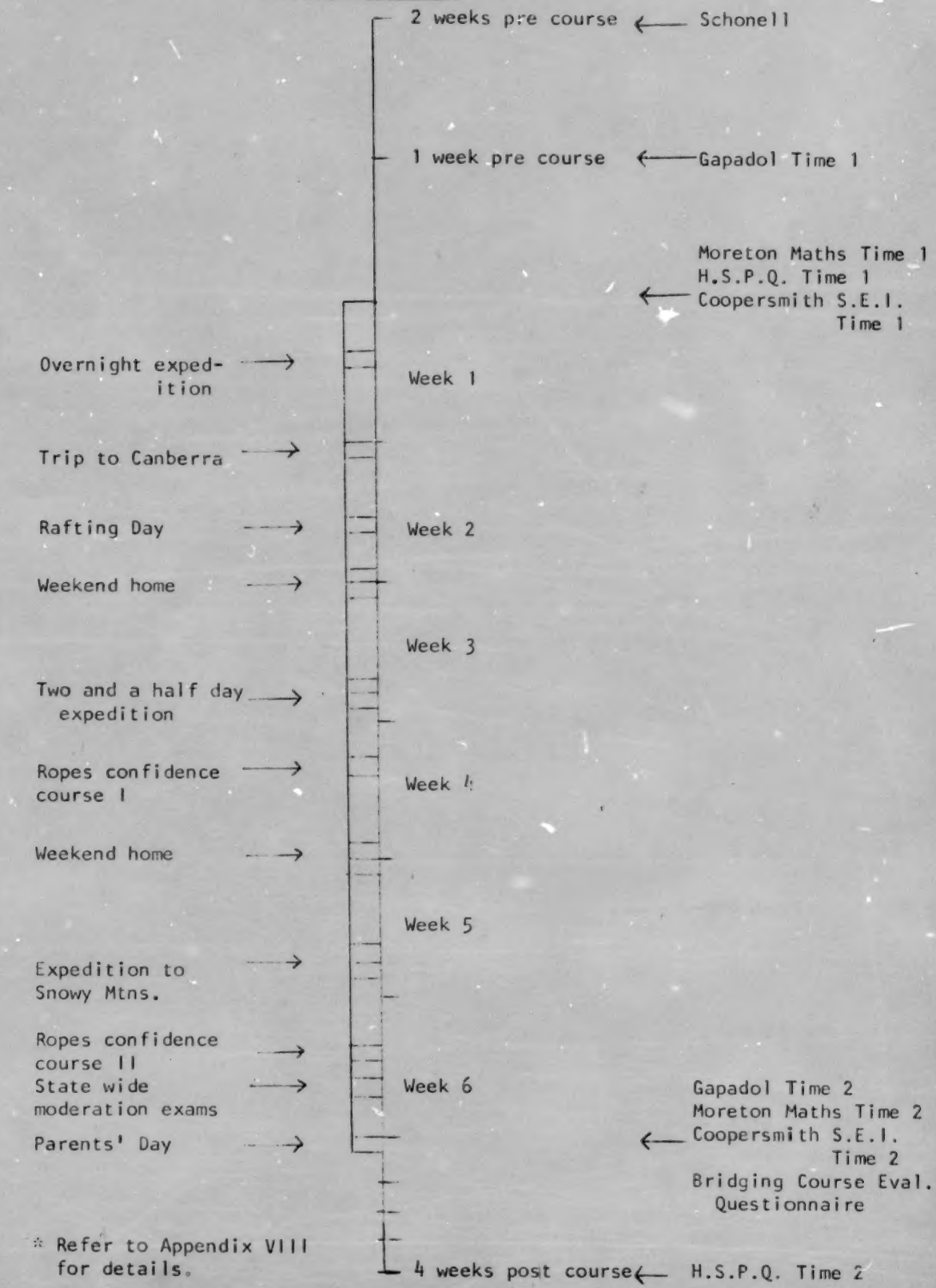
(12) individualizing his work programme and reviewing it continually.

(13) using a variety of materials and activities in order to maintain enthusiasm and a high interest level.

On completion of the programme, the teachers at the boys' school were made aware through reports, of each student's strengths and achievements in order to enable them to continue the job of maintaining the students' interests and abilities.

Outward Bound Bridging Course - 1981 TABLE B

Summary of test administration times and programme outline*


2 weeks pre course ← Schonell
1 week pre course ← Gapadol Time 1
Moreton Maths Time 1
H.S.P.Q. Time 1
← Coopersmith S.E.I. Time 1
Overnight expedition →
Week 1
Trip to Canberra →
Rafting Day →
Week 2
Weekend home →
Week 3
Two and a half day expedition →
Ropes confidence course I →
Week 4
Weekend home →
Week 5
Expedition to Snowy Mtns. →
Ropes confidence course II →
State wide moderation exams →
Week 6
Parents' Day →
Gapadol Time 2
Moreton Maths Time 2
← Coopersmith S.E.I. Time 2
Bridging Course Eval. Questionnaire
4 weeks post course ← H.S.P.Q. Time 2

* Refer to Appendix VIII for details.

EVALUATION PROCEDURES

The evaluation followed a basic pre and post programme test design.

As a number of tests were administered care was taken to distribute the testing.

Table B shows how the testing programme related to the course itself.

The administration of the Schonell Graded Word Test and Gapadol Reading Comprehension was taken approx. one week prior to the programme to establish a T_1 reading ability measure (for details see appendix IV (a) and (b)). The Moreton Mathematics Test - Level III was administered on the first day of the course (details in appendix VI (c)). The Gapadol Reading and Moreton Maths Tests were administered (T_2) on the last day of the 6 week course.

Thus T_1-T_2 measures on these standardized tests permitted an evaluation of growth in achievement in these two areas during the period of the programme. "t" tests were calculated to determine the significance of T_1-T_2 changes on each of the achievement tests. (For results see appendix IV (c)).

As a method of evaluating self-esteem the Coopersmith Self-Esteem Inventory (details see appendix VI (a)) was employed largely because of its sound reputation (e.g. Sears, 1969), its useful sub-scales and its appropriateness and good reliability for this age range (e.g. Rubin, 1978).

This evaluation on T_1 permitted a better understanding of the sample students by comparison to other populations (see appendix IV (d), (e), (f)), by subscales (appendix IV, (c)), and by individual profile (appendix IV, (g)).

The administration of the C.S.E.I. on the final day of the course permitted individual comparative T_1-T_2 to be calculated as an estimate of change during the course. This comparison was made for the group (appendix IV (b) and by sub-scale - (c)), and by individual profiles (appendix IV (g)).

These T_1-T_2 administrations permitted tests of significance of change to be calculated for each achievement test and the C.S.E.I. (see appendix III (a)) and differences to be measured on the total C.S.E.I. and its subscales (appendix III, (b)).

Correlations using the Pearson Product-Moment Correlation Coefficient were calculated between the C.S.E.I. and each of the two main achievement tests in order to assess causal or associative relationships.

The administration of the H.S.P.Q. (see appendix VII (a)) allowed for an increased understanding of each student during the programme and contributed to the case study quality of this study through the graphing of individual sten profiles (appendix VII, (i)).

The H.S.P.Q. was not administered at the end of week 6 - partly because that period was loaded with testing and equally importantly a) immediate post-experience halo effects could be reduced or avoided by a later administration, b) by administering the questionnaire one month after the course, although it would be likely to reduce T_1-T_2 changes, it also would make any changes more significant and; c) it would put to test, whether personality changes stimulated in a special programme could endure the "back-home" environment.

This T_1-T_2 administration allowed for comparisons of the group against the (norm) population - for each form (A & B) - (appendix VII (b)) and for an analysis of sten differences T_1-T_2 - by factors in order to discover whether students tended to become more "normal" through the experience or moved towards the poles on factors (appendix VII (e)).

Tests of significance were calculated for the difference between the O.B.B.C. sample and the norm population in order to ascertain on each occasion whether the O.B.B.C. group could be representative of the general population on each factor.

A Kolmogorov-Smirnov one sample test using the T_1 distribution of scores as the theoretical distribution, and the Wilcoxon matched-pairs signed-ranks test, were both administered to test in different ways the similarity, direction and magnitudes of the two distributions (i.e. T_1 & T_2) of the H.S.P.Q. in order to assess changed patterns of personality of the group by individual factors (appendix VII (g)).

A "t" test for correlated samples was also administered to allow evaluation of the significance of any changes by factors from T_1 to T_2.

The graphing of comparative T_1, T_2 individual sten profiles (appendix VII (i)) permitted individual patterns of personality change to be evaluated.

As early indicators from results suggested, Factor B was most consistently producing change effects and as this is the only cognitive factor in the H.S.P.Q. the results were compared to I.Q. test results (appendix VII, (h)).

In all of the testing programme no control group was used. The particular ethnic, ability and age mixture of the group (see appendix II) made it impossible to satisfactorily establish a comparable control group. (As these students were amongst the lower achievers in the school even an intra school control group would have been impossible through limitation of choices.)

In order to obtain an assessment of some of the attitudes of the students themselves to the course and an estimate of whether the course had achieved its objectives in the social and affective domains a special evaluation questionnaire was devised and administered on the final day of the course (appendix V (a)).

The 41 questions analysed covered 10 thematic areas including: personal change; self understanding; school-academic; and "future" (For results by theme see appendix V, (c)).

The questionnaire was designed as a measurement of change and consequently asked students to evaluate their current position against their position before the course. Although this provided objective feedback on the course its method is recognisably subjective in each individual's evaluation. Whilst this may not provide statistically significant data it provides useful insights into the stated attitudinal patterns of students following the O.B.B.C. experience.

By analysing the means for the group on each question and calculating standard deviations the questions could be ranked in order of significance and variation in responses could be estimated for the group (appendix V, (b)).

Whilst psychometric techniques and standardized tests have obvious importance in evaluation appendix IX shows students comments on their aspirations and achievements in order to ensure the human face of this study is not lost.

RESULTS:

It must be noted at the outset that the small sample size (N = 12) may have considerable effect on statistical analysis especially in determining correlations.

In a few instances aberrant scores have been removed, and declared, where they have an extraordinary effect (e.g. appendix III (c)). In most other analyses interpretation must always be seen as influenced by the small sample. [Ameliorating factors are a) the essential replication of many of the 1980 Pilot Programme results in the present study, b) the closer knowledge of the subjects which permits elements of case study to be available in evaluation.]

Achievement Tests:

With an $\bar{X}_1$ of 11.10 years reading age (R.A.) and $\bar{X}_2$ of 12.8 years (both Gapadol) the $\bar{X}$wd T_1-T_2 i.e. the average increase in reading age was found to be 10.5 months. This was found to be a significant difference ($t = 2.49$, d.f. - 11, $p = <.05$). Increases of up to 3.5 and 3.0 years in reading age were recorded while some students showed no improvement (see appendix IV, table IV). This result compares to the 1980 pilot study where $\bar{X}_1$ of 10.1 years (R.A.) and $\bar{X}_2$ of 12.00 years (R.A.) (also both Gapadol) produced a $\bar{X}$wd of 1.11 years with a range up to 3.3, 3.5 and 4.5 years. These differences were of greater significance ($t = 4.337$, d.f. = 10, $p = < .01$). (Note: The 1980 pilot programme was significantly longer (8 wks) and concentrated more on reading) (See appendix I, table 1 for results).

In mathematics $\bar{X}_1$ (10.0 years) and $\bar{X}_2$ (11.00 years) produced a one year increase in Mathematics Age (M.A.) as tested by the Moreton Maths test - Level III. Increases are considerably more even, with a range of 4 months to 1 year 10 mths ($S = 5.75$). The changes were of greater significance than for reading ($t = 7.07$, d.f. = 11, $p < .001$) (appendix IV - table 4).

Coopersmith Self-Esteem Inventory:

With a mean of 59.6 on T_1 the subjects were found to be low on self-esteem compared to other groups and particularly low compared to Coopersmith's norms (Coopersmith 1967, p. 10, and appendix VI, table 11).

The C.S.E.I. proved a reliable instrument on both test and re-test (T_1 $r = .895$, T_2 $r = .878$) and proved effective in evaluating S-E change.

The mean of T_2 was 69 indicating significant positive change in self-esteem over the course. ($t = 2.345$, $p = <.05$ - see appendix III table 2B.)

All C.S.E.I. subscales (except social self) and the C.S.E.I. itself proved on this investigation to have acceptable to high internal consistency reliabilities (Kuder Richardson 21 'r' range of .75 to .88 for the subscales and .90 and .88 for the totals) (See appendix VI, table 9). Test retest reliabilities proved high over this testing period and acceptable over even longer periods up to 3 years (appendix VI table 7). Comparison with other Australian studies (appendix VI table 10) established the reliability of the C.S.E.I. for Australian subjects (except for the lie scale).

"t" tests of differences between T_1 & T_2 on subscales found no significant change on general self, social-peer, and the lie scale but that very significant changes had occurred on the Home/parents ($t = 4.735$, $p < .001$) and school academic $t = 5.94$ $p < .001$) while the overall self-esteem measure also changed significantly ($t = 2.345$, $p < .05$) [All "t" tests were two tail tests, d.f. = 1] (appendix III table 2B).

There are a number of factors which may be influencing these results, for example in measuring individual changes in S-E some ceiling effects may be operating. Also, there is evidence suggesting that students least confident in their ability to even complete a task feel the most satisfied upon completing something they thought impossible for them (Hamacheck 1978, p. 200). (Such factors could be at work for example in the case of Shayne and Jerry.)

Success and failure are functions of individual perceptions. Consequently self-esteem is essentially in a relationship between aspiration and perceived performance. This poses a problem in interpreting students self-esteem scores no less in the literature (e.g. Morrison, 1977, Coopersmith 1967) than in this study (see appendix III, table 3).

As Germain (1978, p. 388) points out "A child with few competencies can be very realistic about and feel satisfied with his "self", but as parents and educators this may not correspond to our definition of success".

Bridging Course Evaluation Questionnaire:

It must be recognised then that a student's perceptions often determine his attitudes which are often in relationship with his achievements.

The results of the (41 question) Bridging Course Evaluation Questionnaire provide some interesting insights into students' perceptions of themselves on the O.B.B.C. and the O.B.B.C. itself.

On a range of 1.5 to 5.5 the statement (No 36) "I want to keep improving myself" produced a group mean of 5.33 (S = .37) indicating an extraordinarily high level of aspiration for students who entered the course as underachievers. [When Q. No 15 "I feel like giving up" (disagree) is adjusted for one aberrent score it changes from $\bar{X}$ - 4.75, S = 1.16 to $\bar{X}$ = 5.04, S = .66. This would move it into 6th rank and closely support the optimism and determination that pervades the top ranking questions.] This attitude is closely supported by the equal 7th ranking statements; (No 14) "I have a more hopeful attitude about my future" ($\bar{X}$ = 4.92, S = .64) and (No 29) "I would rather not study" (disagreed ($\bar{X}$ = 4.92, S = .64). These statements are given even further support by ranks 12, 13 and 14: (No 30), "I have more faith in my own ability to learn", ($\bar{X}$ = 4.83, S = .47); (No 32) "I enjoy learning more", ($\bar{X}$ = 4.83, S = .62) and (No 28) "I feel more positive towards my schoolwork", ($\bar{X}$ = 4.83, S = .74).

In evaluating the significance of answers a mean above 4.75 was considered very significant (this coincides with the top 15 ranks). Means of 4.75 to 4.26 were considered significant. Means of 4.25 and below were not considered significant. [These significance levels attempt to make some compensation for possible "halo" effects of administration of the questionnaire at the end of the course.]

In summary the most highly significant results (see appendix V, table 5) provide a profile of the group of students as being very substantially hopeful about the future, aspiring to greater achievement, appreciative of the assistance they have or are receiving, increasingly responsible and trustworthy and with very much more positive attitudes to studying and schoolwork and a greater enjoyment of learning. Vicarious to the programme's objectives they showed a greater appreciation of families and enjoyment of outdoor activities.

Other significant results show the students to be happier, friendlier, having greater self understanding, more co-operative, and better at understanding and appreciating others.

It is noticeable that students ranked improvement in Maths as rank 11 ($\bar{X}$ = 4.9, S = .76) but improvement in English as rank 25 ($\bar{X}$ = 4.9, S = .82). This seems to be approximately in the same proportion as their independent maths and reading tests (the results of which were unknown to them) revealed (see appendix IV (c)).

High School Personality Questionaire:

Although dependability and reliability of the H.S.P.Q. (Cattell and Cattell, 1975) may not be as high as one would wish, this instrument was considered appropriate to the purposes of this study (see appendix VII (a)). A more significant problem with the H.S.P.Q. is the modest equivalence coefficients (see appendix VII, table 25A) between form A which was administered T_1 and form B administered T_2. This must unfortunately be a consideration in the interpretation of $T_1 - T_2$ differences.

Means and standard deviations for each factor were calculated on each test T_1 and T_2, and comparisons made with the relevant H.S.P.Q. population norms. (See appendix VII, tables 27 and 28).

A "t" test of differences found that the O.B.B.C. students were lower on Factor B (i.e. were of lower intelligence) if a $>$.10 level of significance is accepted (d.f. = 11, "t" = 1.437); lower on Factor F (i.e. were more unenthusiastic) (at $p=>.10$ ($t= 1.524$)); and higher on Factor J (i.e. were more circumspect and internally restrained). However, at these levels of significance these factors can only be taken as general indicators. O.B.B.C. students were found to be lower on Factor H (i.e. were more timid and threat sensitive) at $>.10>.05$ level of significance ($t=2.309$).

The most clearly significant difference however was factor Q_4. The group's mean was significantly higher (i.e. they were more "tense, frustrated, driven, overwrought and fretful" than the population norms. ($p=<.001$, $t=4.56$). (see appendix VII, table 30).

Individual raw scores were converted to sten scores and graphed on individual profile sheets (see appendix VII, Profiles (i)) in order to represent each student's personality pattern. Each graph provided not only better information for each case study, but permitted $T_1 - T_2$ comparisons. These profiles need individual analysis beyond the scope of this study but it can be seen that at least some individual personality characteristics have undergone major changes in all students. In most cases the degree of change would be well beyond any Form A/ Form B equivalence coefficient deficiencies .

Group means T_1 and T_2 were converted to sten scores and graphed for visual comparison (see appendix VII, table 26). Two factors can be seen to have moved by at least two sten scores. They are; Factor A (toward more warmhearted) and Factor Q_4 (towards less tense and frustrated). Two factors increased in excess of one sten. They are Factor B (toward more intelligent) and Factor H (toward more adventurous). Two factors changed by about one sten score. They are Factor C (toward more emotionally stable, mature) and Factor E (toward more assertive). All other changes were less than

one sten score. (Note attribution of significance to mean scores converted to sten score differences is not established and so may only be taken as an indication of possible significance).

An analysis of individual $T_1 - T_2$ differences by sten scores on each factor (see appendix VII (a)[2] and table 29) revealed that the most dominant pattern of sten score movements was toward the norm in a positive direction (i.e. from low end of scale towards the norm. Total movements this way = 112). Almost as dominant were the sten score movements towards the norm in a negative direction (i.e. from high end of the scale. Total movements this way = 97). Hence total movements towards the norm = 209. This compares with movements towards the poles of 51 (in positive direction) and 48 (in negative direction) = total 99. Hence the O.B.B.C. appears to have had a strong "normalising" effect on the students.

An analysis of $T_1 - T_2$ differences by factor reveals some factors more sensitive to change than others. Factor I, for example, showed little total change ($\Sigma D = 12$) whereas Factor E proved very sensitive to change ($\Sigma D = 32$).

Of the factors which had high levels of change, some revealed changes predominantly in a positive direction; for example

Factor E - $\Sigma D = 32$, $\Sigma WD = +12$
Factor H - $\Sigma D = 25$, $\Sigma WD = +15$
Factor A - $\Sigma D = 23$, $\Sigma WD = +15$

One factor stands out as having all differences in only one (positive) direction; Factor B - $\Sigma D = 16$, $\Sigma WD = +16$.

Some factors have high levels of change which are predominantly negative in direction; for example

Factor Q_4 - $\Sigma D = 22$, $\Sigma WD = -12$
Factor Q_3 - $\Sigma D = 21$, $\Sigma WD = -11$.

Some factors showed high levels of change but change patterns for the group were in both directions almost equally; for example

Factor O - $\Sigma D = 23$, $\Sigma WD = -1$
Factor G - $\Sigma D = 24$, $\Sigma WD = +2$.

In order to test the difference in patterns of distribution of scores on each factor a Kolmogorov-Smirnov one sample test was administered, using T_1 as the theoretical distribution. No overall pattern changes were significant at the $<.05$ level however Factors B, C, H, Q_2 and Q_4 were significantly different at $<.10$ level of significance (see appendix VII, table 31A). When the Wilcoxon matched-pairs signed-ranks test was applied in order to test significance of magnitude and direction of change it was found that Factor B was significant at the $<.01$ level. Factors A and H were not quite significant at $<.01$ but provided indications of potential significance. (See appendix VII, table 31B).

When a "t" test for correlated data was calculated Factor Q_2 demonstrated very significant differences ($t = 4.966$, d.f. = 10, $p = <.001$) while Factor A ($t = 3.069$, $p = <.02$) and Factor B ($t = 2.887$, $p = <.02$) again showed strong differences on T_1 and T_2 (see appendix VII, table 31C).

The modest alternative form correlation coefficients of Form A and B prompt caution in assessing results derived from comparisons. Consequently, the following approach was taken to verify comparitive findings.

"t" tests were administered for T_1 Form A and the subject group. These suggested that the sample means were different from the population means to varying degrees on certain factors. (i.e. Q_4 (<.001), H (<.10), B (>.10), F (>.10), J (>.10)).

When tested T_2 on form B the question arises, were there similar differences revealed? The answer (see appendix VII, table 30) is that no significant differences were found between the means except for Q_4 and that was only at $p>.10$.

The conclusion reached from comparing these two situations is that while the sample group showed varying evidence of being different from the population norms at T_1 it was not so at T_2. This indicates that significant changes had occurred and that they were essentially changes of a "normalising nature". This result gains support from the other analyses, especially the analysis of sten differences (see appendix VII, table 29).

As a guideline indicator of possible educationally significant change an estimate was made of the differences between the means in terms of their standard deviations. Using .5S as an arbitrary level of potential significance the highest factors likely to show educational significanc change were Factor A (.86), Factor B (.79), Factor O (.67) and Factor Q_2 (.66). Factors I (.58), D (.57), H (.52) and E (.51) may also be relevant.

An attempt has been made to summarise the change indicator results referred to in this section in the following table. It must be noted that this table is presented only for visual assessment and has no statistical utility.

TABLE C

Summary of general indicators to change in factors.

Factors -- Change	A	B	C	D	E	F	G	H	I	J	O	Q_2	Q_3	Q_4
By group sten comparisons	++	+						+						--
Analysis of sten diff.	+				+			+					-	-
Kolmogorov-Smirnov test		$<.10$	$<.10$					$<.10$				$<.10$		$<.10$
Wilcoxon M-P, S-R, test	$<.10$	$<.01$						$<.10$						
"t" test $T_1 - T_2$	+ $<.02$	+ $<.02$										$<.001$		
C.f. T_1-T_2 separate "t" tests. L = Sig. diff lost; R = Sig. diff reduced		L				L		L		L				R
Estimate of educ. sig.	*	*		*	*			*	*		*			

Correlations:

The correlation between self-esteem of the students and their results on the Gapodal word comprehension test at T_1 was .55. However, certain effects should be noted with the correlations from the small sample size - in this case if one case only is deleted (Fabian) the correlation is .80.

It must also be noted that these correlations are calculated only within this sample group.

This correlation between self-esteem and results on the Moreton Maths Test - Level III was .165 (however deleting Shayne it becomes .33 and deleting Peter also it becomes .85) (See appendix III, table 3).

At T_2 the C.S.E.I./ Gapadol correlation was found to be -.05. Hence, during the period of the programme the relationship between self-esteem and reading as assessed by Gapadol had been reduced from a significant .55 (or highly significant .80) positive level to no relationship.

While in mathematics the relationship may also have dropped significantly if .85 is accepted as a legitimate T_1 correlation there nevertheless remains a positive, albeit small, correlation within the group between self-esteem and mathematics (as tested by Moreton). If however, the lower correlations of .165 or .33 are accepted then the correlation at T_2 will be seen to have either slightly increased or remained essentially the same.

These results form an interesting comparison with the results for increases on achievement on reading and mathematics presented earlier (see appendix IV, table 4).

DISCUSSION:

Despite evidence which prompts discernment (eg. Chang, 1976 and West, Fish and Stevens, 1980 and Klass and Hodge, 1978) in evaluating the relationship between self-concept/self-esteem and achievement the notion that if you increase self-esteem you will increase achievement has become almost a populist jingle. Although this study has as its basic rationale a theme very similar to this idea, it was not expected that results would be uniform or of the same intensity although the direction (i.e. increase) in achievement was expected.

It was assumed that the programme would increase self-esteem and it was hypothesised that increases in achievement would ensue. However it was also assumed that other factors such as ethnicity, attitudes, personality factors and prior abilities would all contribute significantly to the final outcome and the complexity of its interpretation. These predictions have proven correct.

The use of a broad span personality inventory (the H.S.P.Q.) has given insights into the complexity of personality change which may be stimulated by such a programme as the O.B.B.C.. The movement of personality factors from the extremes towards the norm may be an indication of the potential of such programmes as remedial treatment modalities.

The finding on T_1 H.S.P.Q. that students were significantly more tense (Q_4, $p = < .001$) than the population takes on a special emphasis when compared to evidence of higher reported stress correlating significantly with low self-esteem (eg. Coopersmith, 1967, p.132, $r = -.67$. also see Norem-Hebeisen, 1976). As both Q_4 reduced and S-E increased over the programme significantly, the prospects for effective remediation are furthur indicated.

One of the most intriguing results which must be analysed with caution is the consistent significance of positive Factor B changes on the H.S.P.Q. from $T_1 - T_2$.

The results of Rubin, Dorle and Sandidge (1977) indicating that I.Q. is the best single predictor of academic achievement (correlations ranged from .33 to .51) but that Coopersmith Self-Esteem Inventory scores correlated .31 with I.Q. poses a number of questions for this study. Were the increases in achievement attributable to S-E increases or were the Factor B increases indicating that cognitive development was taking place of a type and magnitude that would produce increased achievement test scores?

The consistency of findings that I.Q. and S-E have a moderately low but positive correlation (eg. Coopersmith, 1967 ($r = .28$) and Simon and Simon, 1975 (verbal $r = .318$, non verbal $r = .276$)) and the findings of this O.B.B.C. study that both S-E and I.Q. appear to have increased (see appendix VII, table 32) indicate that furthur investigation similar to that of West, Fish and Stevens (1980) into causal predominance between self-concept and achievement, is needed into the associative or causal relationship between I.Q. and S-E, especially in remedial areas.

Analysis of the Factor B results presents an absurdity. I.Q. score increases up to 48 points in 6 weeks of programme (plus 4 weeks of lapsed time before T_2 H.S.P.Q. administration) seems to defy accepted understanding of I.Q. scores.

However, during the 6 weeks, iniative, problem solving, success experiences in overcoming difficulties, the satisfaction of tackling the difficult and excitement at mastering new issues were important features basic to the programme. It is postulated therefore that the T_1 scores on Factor B represent a person of low self-esteem, who is tense (high Q_4) and threat sensitive (low H) who is recognisably not achieving well in an academic setting. T_2 scores however possibly represent a person more positively motivated toward trying to solve problems, who has experienced success in doing so and enjoyed it (see results appendix V, table 5), who has a greater confidence in himself and his abilities and who has lost much of his earlier debilitating tension and threat sensitiveness (lower Q_4 and higher H), who is more adventurous and more participating (higher A). With such a different approach to life and to each of its problems it is likely that problems that represent a cognitive abilities test will be approached with more determination, perseverance, confidence and desire to attain the correct answer. If this is so, the only outcome possible is increased scores of Factor B, which while theoretically should be presented as increased I.Q. (as in appendix VII, table 32, as per Cattell) are in fact more clearly, in this case, indicators of attitudes and released potential.

This area needs more investigation, however even then it is unlikely to provide comprehensive results.

If anything, this study is a study of individual differences, while group changes provide the clearest indicators of significant change the real significance may lie in finding the answers to questions such as; when a person like Fabian (see Profile 4, P.109) becomes significantly more enthusiastic (F), much less threat sensitive (H), considerably less restrained (J) and much less tense and at the same time improves his reading by 16 months and maths by 16 months in only 1½ months, why does his self-esteem stay low and show no change? (see appendix VI, table 8) while others with less significant change have increased markedly in self-esteem. And what is the relationship between these personality and achievement changes, the non changed self-esteem and a Factor B "intelligence" which has theoretically improved by the equivalent of 48 I.Q. points? (see appendix VII, table 32)

This type of question proliferates both negatively and positively throughout this study and is illustrative of both some of the advantages of a small sample and a consonant case study approach to wider analysis, and of the puzzles which arise when human behaviour is studied at a more personal level than psychometry normally pursues.

CONCLUSIONS AND RECOMMENDATIONS:

It is clear from the results that the hypothesis that an integrated programme of remedial teaching and Outward Bound experiences would produce positive changes in achievement for boys who were under-achieving can be confidently accepted.

Not only were very significant increases in mathematics and reading abilities achieved but considerable change was also recorded in attitudes, self-esteem and personality.

Increases of up to 3.5 years (average 10.5 months) in reading age and up to nearly 2 years (average one year) in mathematics ability, in 6 weeks prove the effectiveness of the Outward Bound approach in fostering academic achievement with under-achievers.

The results indicated the importance of individual differences of response to such a programme. However as a group, significant changes in the affective domain occurred during the programme.

The students were found to be on average of low self-esteem on entering the programme and about the same as population norms on departing thereby illustrating an overall significant increase in self-esteem over the 6 weeks.

The Coopersmith Self-Esteem Inventory was found to be a suitable and reliable testing instrument for this group and its subscales proved most valuable. The finding that Home/Parent and particularly School/Academic subscales were very significant factors in determining the self-esteem of the subjects (and not general self or social/peer) demonstrates the importance of these two areas in establishing the low self-esteem of under-achievers.

The high positive correlation between low self-esteem and reading disability on entry to the programme ($r = .55/.80$) had disappeared by the end ($r = -.05$) thus indicating that that part of reading disability which was influenced by poor self attitudes had been eliminated over the 6 weeks and any remaining reading disabilities would be attributable to other causes (eg. I Q., poor language background (migrant students) etc.).

The indications for mathematics are in the same direction but less conclusive.

The results of the H.S.P.Q. show the O.B.B.C. as having a considerable "norming" influence overall. During the period of the programme students were shown to have undergone significant individual personality changes while as a whole the most significant changes were towards greater warmth and participation (A+), greater adventurousness (H+), less tension and frustration (Q_4-), and greater social joining (Q_2-).

The most significant positive changes were on Factor B (increased intelligence). Although this poses some problems for interpretation (see discussion), when taken in combination with the achievement test results it supports the conclusion that significant positive changes in cognitive areas has been consistently demonstrated after the O.B.B.C..

The post course evaluation of student attitudes indicated that the programme had been instrumental in increasing student aspirations, sense of hope, enjoyment of learning, and positive approach to school, teachers and schoolwork. The students also showed themselves to be happier, friendlier, having greater self understanding, and being more co-operative, trustworthy and responsible.

The O.B.B.C. Evaluation Questionnaire results provide further indications that much of the growth in cognitive areas may be attributable to changed attitudes as well as self-esteem and prompts enquiry into the nature of causal or associative relationships between these elements of personality for under-achievers.

It is clear that further investigation is needed into the relationships between self-esteem, intelligence, achievement and personality as they are affected by the Outward Bound experience. Such investigations will be necessarily complex as, to be most valuable, they need to assess the characteristics of individuals. Coopersmith's (1967) results suggest for example that S-E is significantly related to the individual's basic style of adapting to environmental demands, and as Outward Bound provides a unique and particularly demanding environment the furthur study of self-esteem in conjunction with broader personality factors within this field would seem to be indicated.

In future studies, in order to overcome the control group difficulties, a time series design is recommended so that subjects may more effectively act as their own comparative group. As further investigation of this type proceeds it should be possible to unravel more of the complexities of the causes of change and move closer to choosing entrants to such programmes who will be best suited to benefit from the programme.

Both the pilot programme and this study give evidence of effective remediation through a short term Outward Bound integrated experiential programme. As the process involved appears to be an "unlocking" of learning potential which stimulates gains beyond those normally expected with remedial processes, this process warrants furthur investigation. It also warrants the attention of those involved in remedial education who see remediation as a long and continuous process. Instead of students entering remedial classes as a school life sentence, these results and this programme give hope that under achieving students can bridge much of the gap in a short intensive period and so get back into the mainstreams of learning and of life.

APPENDICES

I. PILOT PROGRAMME

II. STUDENT PROFILES

III. SUMMARY OF CHANGES AND CORRELATIONS

IV. ACHIEVEMENT TESTS

V. BRIDGING COURSE EVALUATION QUESTIONNAIRE

VI. COOPERSMITH SELF-ESTEEM INVENTORY

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IX. STUDENT'S COMMENTS ON ASPIRATIONS AND ACHIEVEMENTS

APPENDIX I

1980 Pilot Programme

a) Results Gapadol Reading Comprehension Test (Table 1)

b) Pilot Programme Summary of Weekly Events

c) Pilot Programme Outline

Outward Bound Bridging Course.

Pilot Programme - 1980

Results of Gapadol Word Comprehension Tests

(Expressed in reading Ages)

	T1		T2		T1-T2		
	Mths	Y/mths	Mths	Y/mths	Mths	Y/mths	Note
Allan	139	(11.7)	163	(13.7)	+24	(+ 2.0)	
Andrew	163	(13.7)	171	(14.3)	+ 8	(+ 0.8)	
Garry	89	(7.5)	93	(7.9	+ 4	(+ 0.4)	absent 2 weeks
Mark	97	(8.1)	150	(12.6)	+53	(+ 4.5)	
Marty	103	(8.7)	104	(8.8)	+ 1	(+ 0.1)	absent 1 week
Norman	163	(13.7)	202	(16.10+)	+39	(+ 3.3)	
Paul	97	(8.1)	138	(11.6)	+41	(+ 3.5)	
Robert	116	(9.8)	152	(12.8)	+36	(+ 3.0)	
Warren D.	134	(11.2)	141	(11.9)	+ 7	(+ 0.7)	absent 2 weeks
Warren S.	133	(11.1)	150	(12.6)	+17	(+ 1.5)	absent 1 week
Zawai	96	(8.0)	116	(9.8)	+20	(+ 1.8)	
	$\bar{X}$ = 120.9 (10.1)		$\bar{X}$ = 143.6 (12.00)		$\bar{X}$wd = 22.7 (1.11)		
	S = 25.78 (2.1)		S = 29.57 (2.4)		S = 16.57 (1.5)		

N = 11 Ages Range from 13 yrs 7 mths to 16 yrs 4 mths $\bar{X}$ ages = 15 yrs 2 mths Grade 9

"t" test - d.f. = 10 "t" = 4.337 $=<$.01.

Period of programme 8 weeks, Period of testing T1-T2 9 weeks.

Outward Bound Bridging Course.

Pilot Programme - 1980

Notes:

A diagnostic test and an evaluative test which measured various language component skills were administered at the same period as the Gapadol tests. The skills measured in these tests numbered seventeen in total, and included such skills as short and long vowels, consonants, possessives, plurals and others.

Between the commencement and end of the course, a point score increase of 2.7 was recorded after averaging the results of all the students. Looking at the individual scores it was noticed that Gary improved by an average of 5.7 point scores, 3 above the group's average. A number of his increases were in the 7 to 13 range. Marty had a similar above average score with 4.6. These two boys showed the most significant gain in understanding of the language skills between the administering of the diagnostic tests and the evaluative tests.

Note that four students had significant absences. That three of them represent the lowest ranking positions in terms of improvement may be significant.

Outward Bound Bridging Course

Pilot Programme 1980

Summary of Weekly Events

Week 1	Week 2	Week 3	Week 4	Week 5
Settling in - setting up tents -establishing living area, garden, etc. -cooking Initiative tasks Exercises, runs, swims Fishing English, Maths Preparation for expedition -liloing -ECM/CPR -lifesaving techniques 3-day rafting expedition on Mulgrave	Exercises, run, swims Ropes course Community service Cooking English, maths, woodwork, TD sessions Magazine work Fishing Tour of botanic gardens Home for week end	Exercises, run, swims Roster system English, maths, geography, history, social studies, TD,WW,MW, art sessions Ropes course Cooking Home for week end	Run, swims Contract work including science and insect studies Trip to Peats Falls -overnight camp Cooking Initiative tasks Fishing Home for week end	Runs, swims Contract work MW & WW sessions Magazine Expedition preparation 2-day expedition to Behana Gorge -cooking -fishing -singing Home for week end

Week 6	Week 7	Week 8
Contract work TD/MA session Singing Compass work Orienteering Community Service Expedition preparation Fishing 3-day liloing trip on Mulgrave River Night walk Games	Runs, swims Contract work Community service Ropes course II Flying fox Magazine work Fishing Organisation and preparation for Parents Day WW & MW class TD work Parents Day on Saturday Home for Sunday	Runs, swims Contract work Magazine work Expedition preparation 5-day expedition to Hinchinbrook Island - walking - mapreading - surfing - fishing Return to base camp Gapadol test Jesness inventory Clues test Attitudes test

Outward Bound Bridging Course

Pilot Programme 1980

The pilot programme was conducted by Outward Bound from June to August 1980 for fourteen boys from a grade nine class in a high school in Cairns. The boys were chosen according to age, home background and scholastic ability with information taken from the student's record card. The boys selected were not achieving academically at the level considered within their ability range. An Outward Bound staff member worked with the school's remedial teacher in the planning stages before the commencement of the programme.

In the early stages the boys established their living area by building their own furniture, making gardens, keeping chickens and erecting tents. The aims and objectives were given to them so they were aware of their place in the programme to improve themselves consistently in schoolwork, to work with others responsibly and to develop an attitude of concern for themselves, their fellows and their surroundings.

Some Aspects of the Course

Contract work: A number of teaching approaches was used. The method with the most favourable response from the students was the contract system whereby an individual work programme was set out on a weekly basis for each student. A chart was prepared by the staff setting out the individual work programmes on a weekly basis. Students referred to the chart and completed the tasks allotted to them in the work sessions. The work was based on the student's reading and writing ability and each successive contract was determined by their progress on previous tasks.

Diaries: Early in the course students were issued with diaries and recorded the daily happenings. They especially showed interest in keeping a written account of exciting incidents during their expeditions.

Newspaper: Time was set aside for students to read out the current world events from the local newspaper. The boys improved their ability to read out loud to a group.

Magazine: Stories were used from the boys' diaries along with their own drawings, poems and crosswords and compiled into a fortnightly magazine which was sent home to their families and given to their teachers.

Woodwork Class: A manual arts teacher from the boys' school offered to take the boys for a weekly woodwork lesson using the facilities at a local high school.

Roster System: A roster system was established to ensure a fair rotation of the various jobs which included meal preparation, cleaning up, gardening, feeding the chickens, collecting water and firewood. It also reinforced group interaction and the need for cooperation and a sense of responsibility amongst the boys.

Activities: Skill-building activities were incorporated in the programme including initiative tasks designed to bring the boys together in working out a solution to overcome the obstacle; orienteering which develops the use of a compass; water activities such as liloing and rafting; ropes confidence course.

Expeditions: Through the skill building activities, the boys' knowledge and confidence were strengthened and employed in four expeditions, ranging from three to five days in length. The boys showed a greater understanding of their own strengths and weaknesses during the different expedition periods.

Results of Tests: Before the commencement of the course the Gapadol reading test was administered and the individual reading ages were recorded. In order to gauge their increased ability in reading another similar test was administered during the final week. The detailed account of the results and improvement gained is recorded in the table attached.

Other Benefits: Other noticeable benefits were an increased interest and enjoyment in reading; more trusting relationships with peers and adults; a deeper appreciation of the natural environment; and a deeper understanding of their own abilities and potential.

APPENDIX II

Student Profiles

Information: Name

Nationality

Grade

Age at Commencement of Course

Reading Age

Maths Achievement Level

Family Background

Teachers Comments (in some cases)

STUDENT PROFILES (on entry to programme)

Name:	Abdullah
Nationality:	Lebanese
Grade:	Year 10
Age at commencement of course:	15 yrs 10 mths
Reading Age:	7 yrs 6 mths (S)
	7 yrs 11 mths (G)
Maths achievement level:	9 yrs 4 mths

Family background: He has an older brother and two younger sisters and the family shares the house with his uncle and his children. Abdullah's mother cannot speak english though it is obvious she cares for her children.

Name:	Bennett
Nationality:	Greek
Grade:	Year 10
Age at commencement of course:	15 yrs 9 mths
Reading Age:	9 yrs 9 mths (S)
	10 yrs 0 mths (G)
Maths achievement level:	9 yrs 6 mths

Family background: Bennett is the third eldest in a large family. His mother has trouble speaking english and holds to many of her Greek traditions. The family has established an exporting and importing business which has proved a financial success. They have set high hopes on Bennett's future and have given him unrealistic goals even though his academic results have shown the difficulty he has in this field. The family bonds are very strong and his parents are not able to encourage his independence - they actually encourage his dependence on them.

Teacher's comments: Finds academic work difficult. Has never really achieved much in this field. Parents may be beginning to realise their false expectations.

STUDENT PROFILES (on entry to programme) (cont'd)

Name:	Danny
Nationality:	Australian
Grade:	Year 9
Age at commencement of course:	14 yrs 5 mths
Reading Age:	12 yrs 3 mths (S)
	14 yrs 9 mths (G)
Maths achievement level:	10 yrs 4 mths

Family background: He lives with his mother and younger sister. Because of the lack of a father figure in the family, Danny has taken on more of the family duties and responsibilities. He shows a genuine concern for the well-being of his mother and sister, and is also helpful when household jobs need to be done.

Teacher's comments: Danny has more ability than he shows. He is basically lazy and lacks motivation, as school hardly interests him. He is mostly courteous, but has a mischievous streak. Danny is likeable but can be moody. School is low on the the list of his priorities.

Name:	Fabian
Nationality:	Equadorian
Grade:	Year 10
Age at commencement of course:	15 yrs 2 mths
Reading Age:	13 yrs 7 mths (S)
	15 yrs 6 mths (G)
Maths achievement level:	9 yrs 0 mths

Family background: Fabian is the oldest of three children and has been given a large amount of responsibility in the family. He speaks well of his family and shows respect for others too. Fabian is always well-mannered and polite - a good reflection on his parent's attitude.

Teacher's comments: Friendly but shy. As far as schoolwork is concerned Fabian does his best but is slow to grasp language patterns and abstract concepts. Has a lot of potential. Willing to try anything.

STUDENT PROFILES (on entry to programme) (cont'd)

Name:	Gary
Nationality:	Australian
Grade:	Year 9
Age at commencement of course:	14 yrs 3 mths
Reading Age:	11 yrs 9 mths (S)
	13 yrs 10 mths (G)
Maths achievement level:	11 yrs 6 mths

Family background: Gary is the oldest in a family of three children. His parents show a lot of concern for his well-being and have quite a close relationship with all their children. They do not have unrealistic expectations of their son though they do want him to try hard and do his best at whatever he attempts. They are also conscious of offering him whatever opportunities are available to further his progress.

Name:	Jerry
Nationality:	Maltese
Grade:	Year 9
Age at commencement of course:	14 yrs 8 mths
Reading Age:	7 yrs 3 mths (S)
	7 yrs 9 mths (G)
Maths achievement level:	9 yrs 0 mths (Under the testing range of the evaluation instrument)

Family background: Jerry has an older brother who has achieved relatively well at school and in the sporting field. His parents do not have high expectations for Jerry's future though he has shown a strong desire to become a motor mechanic. He works for a friend who runs a car repair workshop and gives Jerry a number of jobs and experience in the mechanical field which he enjoys.

STUDENT PROFILES (on entry to programme) (cont'd)

Name:	Joe
Nationality:	Lebanese
Grade:	Year 10
Age at commencement of course:	16 yrs 1 mth
Reading Age:	9 yrs 5 mths (S)
	10 yrs 2 mths (G)
Maths achievement level:	9 yrs 4 mths

Family background: Joe is from a large family of boys and shows both a respect for his parents and a strong need to break the family ties and establish his own independence. He is conscious of the family's bond to the home country and is aware of the conditions faced by young people his age in that country. He makes a joke about his mother's lack of understanding of the english language but still shows a strong regard for her.

Teacher's comments: Generally very co-operative. Has moody periods during which he becomes extremely difficult to handle unless stern disciplinary measures are taken. Can be constantly striving for dominance in a group situation.

Name:	John
Nationality:	Australian (Part Aboriginal)
Grade:	Year 10
Age at commencement of course:	15 yrs 1 mth
Reading Age:	14 yrs 5 mths (S)
	16 yrs 11 mths (G)
Maths achievement level:	10 yrs 8 mths

Family background: John has an older brother and older sister and looked after by his mother. She is very proud of John's ability but is worried by his laziness and lack of application. Her other children have achieved quite well and they all aspire to reaching certain goals - the two boys are aiming to be accountants and the daughter a pilot. The mother who is part-Aboriginal, surrounds them all with a strong feeling that she cares for them and loves them.

Teacher's comments: Very well cared for. Unfortunately, John can be extremely lazy with regard to taking his share of the work.

Special Note: Although low in maths ability John's language ability was essentially too high for inclusion in this programme. However concern about his motivation/application compared to his potential led to his inclusion. His presence was more specifically aimed at more effective development (and improvement in maths).

His high scores in reading and self-esteem in particular have certain statistical effects on the results and generally tend to make the evaluation of effects of the programme more conservative.

STUDENT PROFILES (on entry to programme) (cont'd)

Name:	Mario
Nationality:	Lebanese
Grade:	Year 10
Age at commencement of course:	14 yrs 6 mths
Reading Age:	12 yrs 3 mths (S)
	13 yrs 1 mth (G)
Maths achievement level:	10 yrs 4 mths

Family background: Mario has one younger sister to whom he is very close. He is very gentle towards his sister and mother who cannot speak english. His family shows a high regard for him and are keen to offer him the best opportunities. There are still strong ties with his home country yet the whole family is glad to have left it and to be living in Australia.

Name:	Peter
Nationality:	Australian
Grade:	Year 10
Age at commencement of course:	16 yrs 2 mths
Reading Age:	10 yrs 0 mths (S)
	9 yrs 3 mths (G)
Maths achievement level:	9 yrs 4 mths

Family background: Peter is the last child of a large family, his oldest brother being 42 years old. Even though his parents are in their 60's they still have a lot of energy to share with Peter and show that they care for him. Because of their attentive and caring attitude, Peter has a high regard for himself too. He has developed a gentle, kindly nature and is always willing to share his possessions with others. His parents always try to offer him the best opportunities.

Teacher's comments: A low achiever. His english problems are particularly apparent in written work. Peter has some good ideas but has difficulty formalising these in anything more than the simplest of terms. Sentence structures are equally poor.

STUDENT PROFILES (on entry to programme) (cont'd)

Name:	Shayne
Nationality:	Australian
Grade:	Year 10
Age at commencement of course:	15 yrs 5 mths
Reading Age:	10 yrs 2 mths (S)
	11 yrs 4 mths (G)
Maths achievement level:	12 yrs 0 mths

Family background: Shayne comes from a warm loving family, and shows a high degree of respect for his parents and brothers and sisters. His parents are keen to do their best for him and offer him many opportunities that will help his progress. Tendency to hyper-activity.

Teacher's comments: Very boyish. Has a reading problem. Tends to be lazy in a group co-operative situation.

Name:	Stephen
Nationality:	Italian
Grade:	Year 10
Age at commencement of course:	16 yrs 3 mths
Reading Age:	10 yrs 6 mths (S)
	11 yrs 5 mths (G)
Maths achievement level:	9 yrs 4 mths

Family background: Stephen is the eldest boy in a large family. His parents show a lot of concern for his well-being and would like him to do well at school. He has a number of hobbies and interests at which he works quite hard.

Teacher's comments: A shy boy who has potential not yet tapped.

APPENDIX III

Summary of Changes and Correlations

a) Summary of Changes Effects - Tests of Significance (Table 2A)

b) Summary of C.S.E.I. Subscale Changes and Tests of Significance (Table 2B)

c) Correlations Between Coopersmith S.E.I. and achievement tests (Table 3)

Outward Bound Bridging Course - 1981

Summary of Change Effects T1 - T2

	$\bar{X}d$	S	$\bar{X}wd$	t test *	2 tail test of signif. ** "p"
Coopersmith S.E.I.	14.0	14.05	+ 9.33	2.345	<.05
Gapadol Reading Comprehension (m)	11.17	13.4	+10.5	2.49	<.05
Moreton Maths Test Level III (m)	12.25	5.75	12.25	7.07	<.001

Notes:

(m) results expressed in months.

* for "t" test results of subscales see below.

** d.f. = 11

$\bar{X}d$ = mean of unweighted differences

S = standard deviation of differences.

$\bar{X}wd$ = mean of weighted differences

Coopersmith S.E.I. T1 - T2

Summary of Sub-scale changes

	General Self	Social-Peer	Home Parents	Lie Scale	school academic	Total
"t"* =	.679	.767	4.735	-.88	5.14	2.345
2 tail test of signif. d.f. = 11 p =	NOT SIGNIF.	NOT SIGNIF.	SIGNIF. AT <.001	NOT SIGNIF	SIGNIF AT .<001	SIGNIF. AT <.05

* $t = \frac{\Sigma wd}{\sqrt{\frac{N\Sigma wd^2 - (\Sigma wd)^2}{N-1}}}$

(Formula for "t" test for differences between two measures taken of the same sample).

Outward Bound Bridging Course - 1981

Correlations* between Coopersmith S.E.I. & achievement Tests

	T1 r=	T2 r=
Coopersmith - Gapadol Word Comprehension	.55	-.05
A*	(.80)	
Coopersmith - Moreton Maths Test Level III	.165	.29
B*	(.33)	
C*	(.85)	

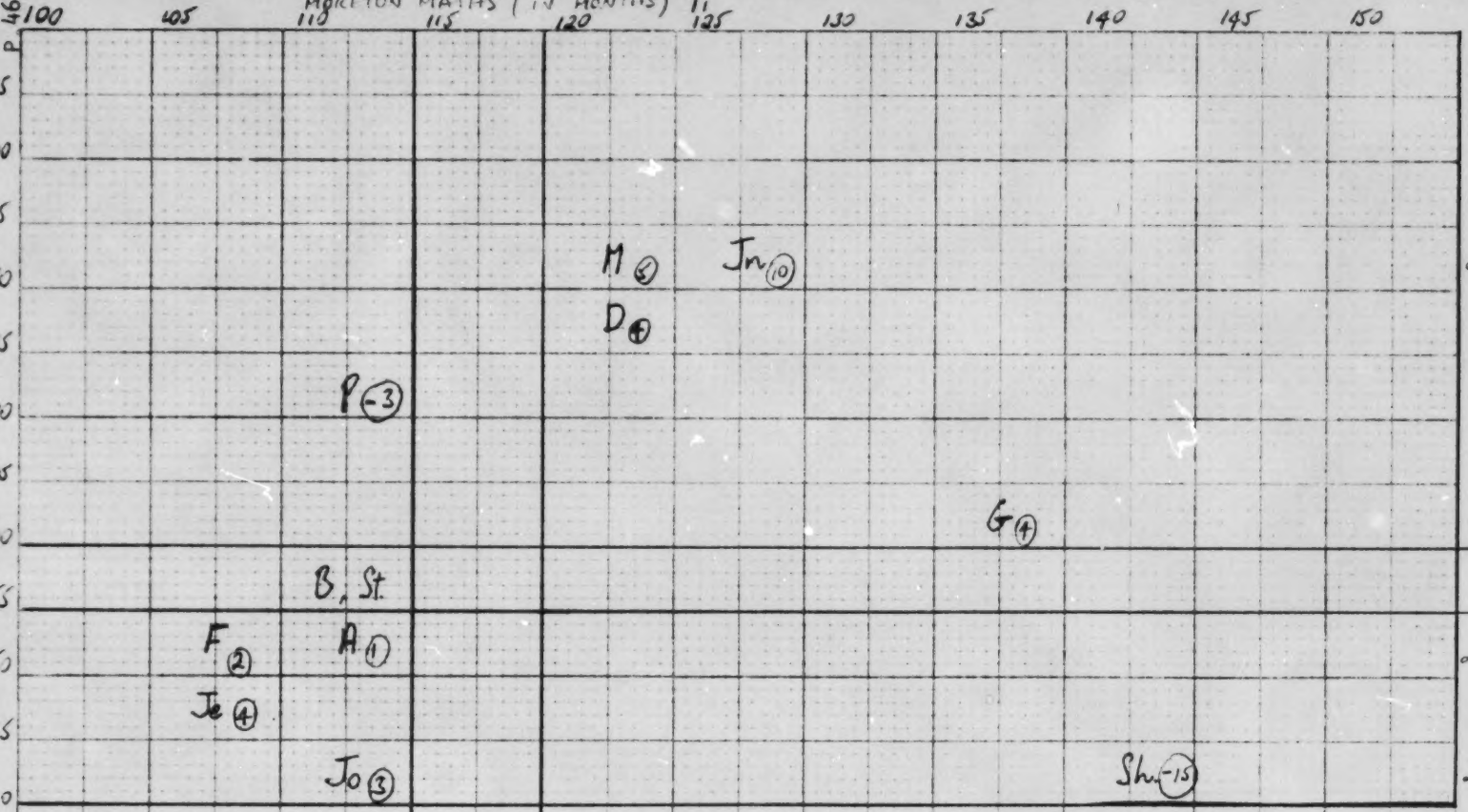
* Using Pearson Product-Moment Correlation Coefficient.

A* By deleting Fabian (v. low S.E. despite relatively high achievement) and Peter (v. high S.E. despite relatively low achievement) the correlation co-efficient is .80.

B* By deleting Shayne (v. low S.E. despite relatively high achievement) the correlation co-efficient is 0.33.

C* By deleting Shayne and Peter (v. high S.E. despite relatively low achievement) the correlation co-efficient is 0.85.

CORRELATION BETWEEN MORETON MATHS T_1 and COOPER SMITH SEL. T_1



f_x	0	2	5		2	1	0	1	1	0	0
x'	-3	-2	-1		1	2	3	4	5	6	7
fx'	0	-4	-5		2	2	0	4	5	0	0
$f(x')^2$		8	5		2	4	0	16	25	0	0

$N = 12$ $\quad \Sigma fx'y' = 15$ $\quad \Sigma fx' = 4$ $\quad \Sigma fy' = 8$

$\Sigma f(x')^2 = 60$ $\quad \Sigma f(y')^2 = 100$

f_y	y'	fy'	$f(y')^2$	$f(x'y')$
0	7	0	0	0
0	6	0	0	0
2	5	10	50	15
1	4	4	16	4
1	3	3	9	-3
0	2	0	0	0
1	1	1	1	4
2	-1	-2	2	3
1	-2	-2	4	4
2	-3	-6	18	-12

$r = 0.165$

by deleting Shayne (Cooper T. 40, Moreton 144)

$r = 0.33$

by deleting Shayne & Peter (Cooper S.-L. 70 Moreton 112)

$r = 0.85$

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CORRELATION BETWEEN MORETON MATHS T_2 AND COOPER SMITH S.E.I T_2

MORETON (IN MONTHS) T_2 AS

P.S.T.	110	115	120	125	130	135	140	145	150	155	160
95					$\bar{x}=132.5$						
90											
85	Je (16)			D (4)					Sh (20)		
80											
75							Jn (4)				
70											
65			B		St	M					
60		A (3)			P				G (4)		
55											
50			F (6)								
45			Jo (8)								
40											
f_x	1	1	2	1		1	1	0	1	1	0
x'	-4	-3	-2	-1		1	2	3	4	5	6
fx'	-4	-3	-6	-1		1	2	0	4	5	0
fx'^2	16	9	12	1		1	4	0	16	25	0

COOPER SMITH T_2

f_y	y'	fy'	fy'^2	fy'^3
0	6	0	0	0
0	5	0	0	0
3	4	12	48	0
0	3	0	0	0
1	2	2	4	4
0	1	0	0	0
3	-1	-3	3	-1
0	-2	0	0	0
1	-3	-3	9	6
1	-4	-4	16	8
0	-5	0	0	0

$r = 0.29$

$N = 12$ $\quad \Sigma fx'y' = 17$ $\quad \Sigma fx' = -2$ $\quad \Sigma f(x')^2 = 84$ $\quad \Sigma fy' = 4$ $\quad \Sigma f(y')^2 = 80$

A - Abdullah
B - Bennett
D - Danny
F - Fabian
G - Gary
Je - Jerry
Jo - Joe
Jn - John
M - Mario
P - Peter
Sh - Shayne
St - Stephen

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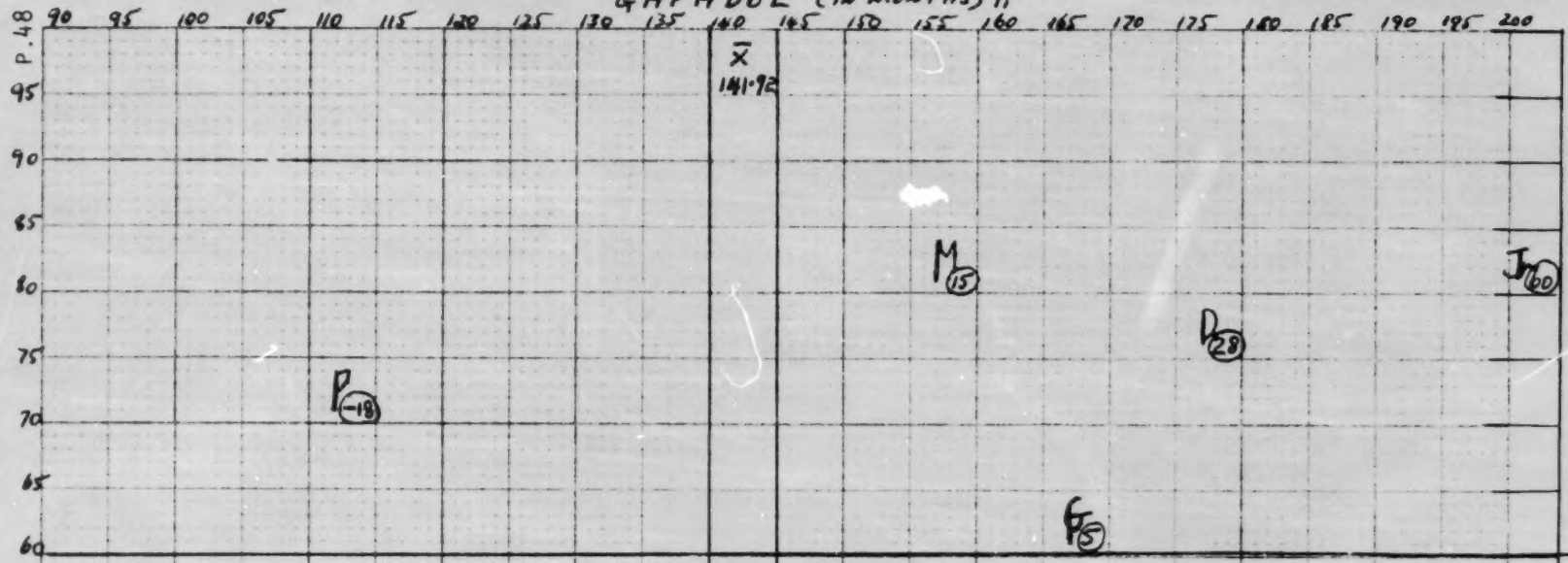
CORRELATION BETWEEN GAPODOL T_1 AND COOPERSMITH T_1

GAPADOL (IN MONTHS) T_1

COOPERSMITH T_1



fx	1	1	0	0	1	0	2	0	0	2	0	0	0	1	0	1	0	1	0	1	0	0	1
x'	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
fx'	-10	-9	0	0	-6	-5	-8	0	0	-2	0	0	0	3	0	5	0	7	0	9	0	0	12
$f(x')^2$	100	81	0	0	36	0	32	0	0	2	0	0	0	9	0	25	0	49	0	81	0	0	144

f	y	y'	fy'	$f(y')^2$	$fx'y'$
0	8		0	0	0
0	7		0	0	0
0	6		0	0	0
2	5		10	50	75
1	4		4	16	28
1	3		3	9	-18
0	2		0	0	0
1	1		1	1	5
2	0		(+18)	(+76)	
2	-1		-2	2	0
1	-2		-2	4	20
2	-3		-6 (-10)	18 (+24)	15

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$N = 12$

$\Sigma fx'y' = 121$ $\Sigma fx' = -1$

$\Sigma f(x')^2 = 5$

$\Sigma fy' = 8$

$\Sigma f(y')^2 = 100$

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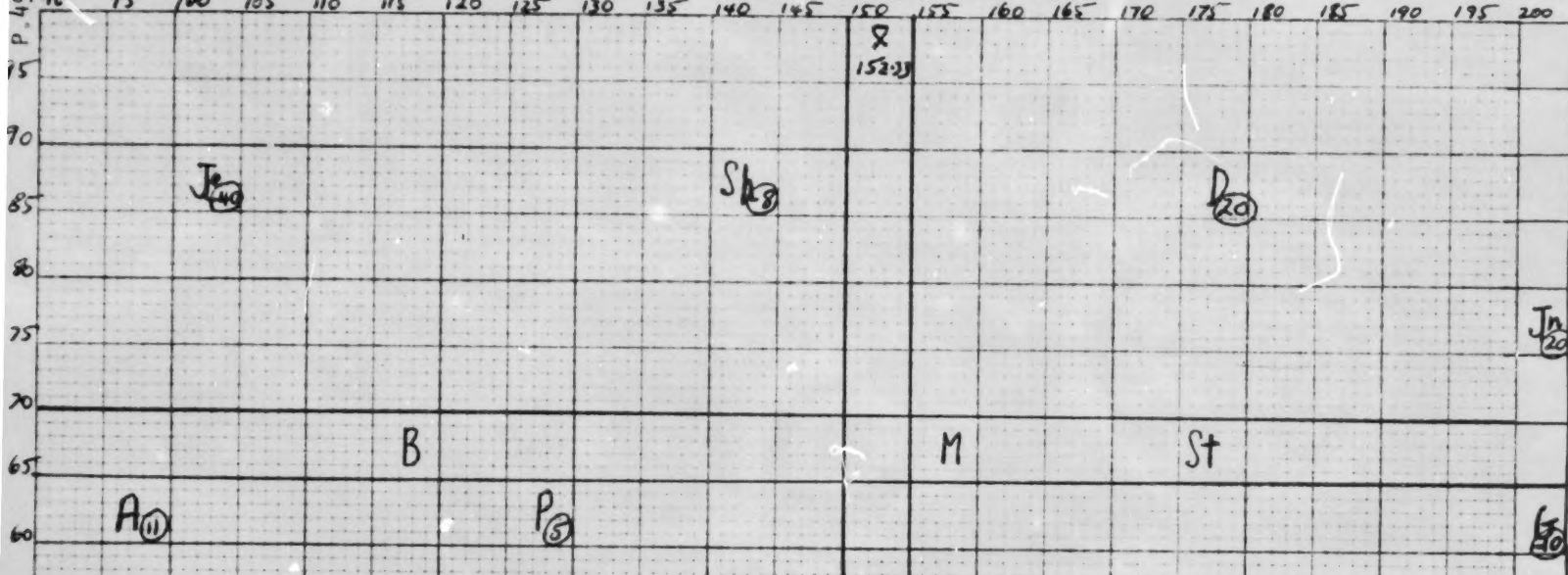
$r = .$

[selecting Tolian & Peter

$r = .80$]

CORRELATION BETWEEN GAPADOL T_2 AND COOPERSMITH S.E.I. T_2

GAPADOL (IN MONTHS) T_2



f	0	1	1	0	0	1	0	2	0	0	1	0		1	0	0	0	2	0	0	0	0	3
x'	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1		1	2	3	4	5	6	7	8	9	10
fx'	0	-11	-10	0	0	-7	0	-10	0	0	-3	0		1	0	0	0	10	0	0	0	0	30
fx'^2	0	121	100	0	0	49	0	50	0	0	4	0		1	0	0	0	50	0	0	0	0	300

58 $N = 12$ $\Sigma fx'y' = -12$ $\Sigma fx' = 0$ $\Sigma f(x')^2 = 675$ $\Sigma fy' = 4$ $\Sigma f(y')^2 = 80$

f	y	y'	fy'	$f(y')^2$	fx'y'
0		6	0	0	0
0		5	0	0	0
3		4	12	48	-28
0		3	0	0	0
1		2	2	4	20
0		1	0	0	0
3		-1	-3	3	6
0		-2	0	0	0
1		-3	-3	9	-30
1		-4	-4	16	20
0		-5	0	0	0

$r = -0.05$

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A - Abdullah
B - Bennett
D - Danny
F - Fabian
G - Gary
Je - Jerry
Ja - Ja
Jn - Jonn
M - Mario
P - Peter
Sh - Shayne
St - Stephen

APPENDIX IV

Achievement Tests

a) Schonell Graded Word Reading Test:R1
   i) Instrument
   ii) Purpose
   iii) Administration
   iv) Presentation of Results

b) Gapadol Reading Comprehension
   i) Instrument
   ii) Purpose
   iii) Administration
   iv) Presentation of Results

c) Moreton Mathematics Test - Level III
   i) Instrument
   ii) Purpose
   iii) Administration
   iv) Presentation of Results

d) Results - Schonell/Gapadol/Moreton - (T_1-T_2)
   (Table 4)

Outward Bound Bridging Course - 1981

Instrument: SCHONELL GRADED WORD READING TEST: R1

This test was first published in Britain in 1942, then known as Schonell's R1 (Schonell & Schonell, 1960) and since then has been a commonly used reading test in schools. It is an individual attainment test in word recognition for ages five to fifteen composed of 100 words which have no designed connection with any method of reading teaching. The test appears to be equally useful in schools following the look-and-say, whole sentence, phonic methods, or combined methods. The test has been used repeatedly, even at monthly intervals to check progress, without any practice effect being detected (Savage, 1968, p.44).

Purpose:

The test has been changed to suit Australian conditions (Andrews, 1965 and Linfoot, 1967). The result, called the St Lucia Graded Word Reading Test (Andrews, 1969) has been a re-arrangement of the order of the words along with an improved examiner's record form.

An advantage of this test is its categorization of reading achievement levels into reading ages, based on Australian norms.

This individual oral test was used to assess the student's level of reading and offered the means for making a more detailed analysis of reading difficulties. Important diagnostic information was also made available in the analysis of the errors made by each pupil. The test manual lists a number of categories of errors and an error analysis grid on the examiner's record form thus allowing for the systematic recording of such errors proved useful.

Administration:

The test was administered individually to each student in the two weeks at school prior to commencement of the programme.* Due to other exam pressures on return to school, the test was not administered after the course as a Time 2 evaluation of reading progress.

* The students read out each of the hundred words and the teacher recorded the words spoken incorrectly. The raw score of correct words was converted to an estimated reading age.

Presentation of Results:

The results of this pre-course test offered information for the comparison between the reading age gained with those recorded on the Gapadol reading comprehension Time 1 test. The Pearson product - moment correlation co-efficient between these two tests for this sample of students was calculated to be 0.92. This significantly high correlation gave added confidence to assessing the general reading ability of each student at T1 (Commencement of Course).

Outward Bound Bridging Course - 1981

Instrument: GAPADOL READING COMPREHENSION

Gapadol Reading Comprehension (McLeod and Anderson, 1972) is a group reading comprehension test. It is designed to discriminate at high ability and age levels and therefore most suitable for secondary school students. The technique employed for measuring reading comprehension is cloze procedure, which entails the deletion of words from a passage. The testee fills in the blanks, and is scored according to the number of correct words gained. Some of the words deleted were of a high redundancy.

Rankin (1957) and Jenkinson (1957) found that there is a high correlation between the scores of standardized reading tests and the cloze test scores. The Pearson product - moment correlation co-efficient between the Schonell test results and the Gapadol Time 1 results from this sample was calculated at 0.92. These tests are measuring different aspects of reading ability yet the correlation co-efficient shows that for this particular population the tests are providing very similar estimates of reading age.

The test comes in two forms (FORM G & FORM Y). The median reliability co-efficient of both forms was calculated to be 0.91, with a median standard error of an individual's score of 3.47 (McLeod 1972). The full list of reliability and standard error of individual scores was calculated for both forms and presented in table 3 of the Gapadol manual.

Purpose:

The Gapadol reading comprehension test was designed for two educational functions (1) as an initial screening device to help teachers detect pupils who require special attention and (2) as a measure in assessing the effectiveness of a specific remedial programme. In this programme, the results of the Gapadol served both purposes. It initially determined the participants on the course. On completion of the programme, the student's difference between the first and second test scores showed any increase in reading age.

The tests are not speed tests but power tests and are therefore quite free from practice effect. To minimise any possibility of practice effect alternate forms can be administered in successive assessments.

Australian school children are used for the norming sample of this test, an advantage to this programme. (McLeod & Anderson, 1970). Although the reading age norms ranged from 7.5 years to 17 years they didn't quite cover the reading achievement levels of the students in this sample.

Administration:

The test was administered one week before the course started and on the second last day of the programme. Testing time is thirty minutes with approximately ten minutes for instructions. It is simple to administer. To eliminate students copying from each other, the two forms can be administered alternately so that pupils adjacent to each other are completing different tests. This procedure was used in this study.

Presentation of Results:

Two tables for the evaluation of reading achievement are provided in the manual (McLeod & Anderson, 1972, pp. 8-12.) Table 1 provides scores for both Form G & Form Y, for (1) R (reading retardation-lower 10% of his age group)
(2) N - (norms for the age group) and
(3) S (top 10%-superior).

The evaluation of results and derivation of reading ages used in this programme was taken from Table 2 of the manual (p 11). The primary purpose in using this scoring procedure was to ascertain the individual student's growth in reading age between Time 1 and Time 2 and relate this change to any identifiable changes in the affective domain during the Bridging Course.

Outward Bound Bridging Course - 1981

Instrument: MORETON MATHEMATICS TEST - LEVEL III

This standardized test is a test of numerical operations. It is based on new mathematics programmes, in particular the Programme in Mathematics, and standardized on school children enrolled in grades 5, 6 & 7. The 30 items of the test are graded in difficulty. These items were selected from a number of teacher constructed tests devised in five metropolitan Queensland primary schools. The final form of the test was standardized using a random sample of sixteen metropolitan state and non-state schools. (N = 1,044.) Age norms were calculated along with normalized 15 point scale scores and percentiles.

The manual states that Kuder Richardson 20 measure of internal consistency produced reliability co-efficients of Grade 5 - r = .75; Grade 6 - r = .76; Grade 7 - r = .85.

The method of selection of test items ensured adequate content validity. The concurrent validity co-efficient for the Level III test and Form M of the Moreton Arithmetic tests is 0.79. (Andrews, et al, 1972, p.6)

Purpose:

The Henshaw Secondary Mathematics test which is a diagnostic and criterion referenced test for years 8-10 students; was administered and found to be too difficult for these students. The Moreton Maths test not only measured the students' achievement level in the four basic mathematical functions of addition, subtraction, multiplication and division but also was a useful screening device and diagnostic aid.

An advantage of this test is its use of Australian norms in the compilation of the standardized age norms, the 15 point scale scores, and percentiles.

Administration:

The test was administered on the second day of the course and on the second last day of the six-week programme. Students were given the test according to the guidelines in the manual. Thirty minutes was the allowed time for the completion of the test with the usual exam conditions applying.

Presentation of Results:

The manual offers three types of scoring (i) the 15 point scale scores, (ii) percentiles and (iii) age norms. The age norms are of primary use in interpreting the level of an individual student and therefore most suited to this testing programme. The table of age norms was comprised by finding the average raw score for pupils of a given chronological age. This allowed some relationship (albeit imperfect) to be seen between maths and reading ages. Users from other states have been advised of the need to realize that the performance of Queensland primary school pupils in mathematics is generally superior to that of pupils in other states. (Anderson, 1973, p.13)

In this programme, the Moreton Maths Test was administered at Time 1 and Time 2, and the two scores were recorded. Any increase in results were listed according to the age difference attained.

TABLE 4

Outward Bound Bridging Course - 1981

Results of Schonell R1, Gapadol reading comprehension and Moreton Maths tests - (T1 - T2)

(expressed in reading ages and maths achievement ages)

	Schonell T1		Gapadol T1		Gapadol T2		Gapadol T1-T2		Moreton T1		Moreton T2		Moreton T1 - T2	
	Mths	Y/mths	Mths	Y/mths	Mths	Y/mths	Mths	Y/mths	Mths	Y/mths	Mths	Y/mths	Mths	Y/Mths
Abdullah	90	(7.6)	95	(7.11)	95	(7.11)	0	0	112	(9.4)	116	(9.8)	+ 4	(+ .4)
Bennett	117	(9.9)	120	(10.0)	118	(9.10)	-2	(- .2)	114	(9.6)	120	(10.0)	+ 4	(+ .4)
Danny	147	(12.3)	177	(14.9)	177	(14.9)	0	0	124	(10.4)	128	(10.8)	+ 4	(+ .4)
Fabian	163	(13.7)	186	(15.6)	202	(16.10)	+16	(+1.4)	108	(9.0)	124	(10.4)	+16	(+1.4)
Gary	141	(11.9)	166	(13.10)	202	(16.10)	+36	(+3.0)	138	(11.6)	152	(12.8)	+14	(+1.2)
Jerry	87	(7.3)	93	(7.9)	102	(8.6)	+ 9	(+ .9)	108	(9.0)	114	(9.6)	+ 6	(+ .6)
Joe	113	(9.5)	122	(10.2)	127	(10.7)	+ 5	(+ .5)	112	(9.4)	124	(10.4)	+12	(+1.0)
John	173	(14.5)	203	(16.11)	203	(16.11)	0	0	128	(10.8)	142	(11.10)	+14	(+1.2)
Mario	147	(12.3)	157	(13.1)	155	(12.11)	-2	(- .2)	124	(10.4)	138	(11.6)	+14	(+1.2)
Peter	120	(10.0)	111	(9.3)	127	(10.7)	+16	(+1.4)	112	(9.4)	134	(11.2)	+22	(+1.10)
Shayne	122	(10.2)	136	(11.4)	143	(11.11)	+ 7	(+ .7)	144	(12.0)	158	(13.2)	+14	(+1.2)
Stephen	126	(10.6)	137	(11 5)	177	(14.9)	+41	(+3.5)	112	(9.4)	132	(11.0)	+20	(+1.8)
$\bar{X}$ =	129	(10.9)	142	(11.10)	152	(12.8)			120	(10.0)	132	(11.0)		
S =	25.3	(2.1)	34.4	(2.10)	37.7	(3.2)			11.45	(.11)	13.2	(1.1)		

66

67

*r = 0.92

$\bar{X}d$ = 11.17,
S(d) = 13.4
$\bar{X}wd$ = 10.5
"t" = 2.49
d.f. = 11
p = < .05

$\bar{X}d$ = 12.25m
S(d) = 5.75
$\bar{X}wd$ = 12.25
"t" = 7.07
d.f. = 11
p = < .001

* Pearson Product-Moment Correlation

N = 12 Ages range from 14 yrs 3 mths to 16 yrs 3 mths. $\bar{X}$ ages = 15 yrs 4 mths. Grade 10 = 9 boys; Grade 9 = 3 boys.

Period of programme 6 weeks. Period of testing T1 - T2 6-7 weeks.

APPENDIX V

Bridging Course Evaluation Questionnaire

a) i) Instrument

ii) Purpose

iii) Administration

iv) Presentation of Results

b) Results in Rank Order (Table 5)

c) Results by Theme (Table 6)

Outward Bound Bridging Course - 1981

Instrument: BRIDGING COURSE EVALUATION QUESTIONNAIRE

Forty-eight questions reduced to 41 questions in the final analysis. Questions devised by Outward Bound in an attempt to attain a response to the course which could be analysed. Devised as an objective alternative to a subjective course evaluation.

Questions are distributed across 10 thematic areas: Personal change (4); Self-understanding (4); Family (2); Social (8); Responsibility (4); School/Academic (8); Future (5); Outdoor Education (3); Miscellaneous (2).

Answers are given on a five point Likert scale ranging from strongly disagree to strongly agree. This scale was chosen because of its well-established satisfactory reliabilities, typically in the 0.80's (Thorndike, 1955, p. 415).

Purpose:

This instrument was devised specifically for evaluating the Bridging Course Programme. No other instrument appeared available which was likely to provide both objective feedback from participants in the affective domain and at the same time be relevant to the particular aims of the course.

The questionnaire was designed to measure change and consequently uses questions which ask for the student to judge his current attitudes against those on commencing the programme. This technique has obvious weaknesses and a revised version of this questionnaire has been prepared for use in future to be used on a pre-course, post-course administration basis.

Administration:

The questionnaire was administered on the last morning of the six week programme. Each question was read to the students and explanations of its meaning made if necessary (this procedure was felt necessary given the variable reading abilities of the students).

The introductory statements emphasised that the questionnaire related to how the students felt about the statements in the context of the six week course.

The administration of such a questionnaire on the last day of a successful six week experience can be expected to reflect positive feelings from the participants. Consequently certain halo effects must be anticipated in the results. As this questionnaire is both an attempt to assess the feelings of the participants and to gain some evaluation of the Programme through their eyes then administration could not be at any other time. (To administer it after the course strikes difficulties in deleting other variables concerned with returning home and other post programme experiences). However, in order to minimise the 'halo' effect of the good feelings present at the end of the course, the aims of the questionnaire were explained clearly to the students beforehand. They were informed that honest answers were needed because the results were to be used for the improvement of future courses.

Presentation of Results:

By attributing mid interval values on the Likert scale to give a score range of 1.5 - 5.5 the means and standard deviations were calculated for each question.

To allow for comparison negatively oriented questions had polar values reversed so that a negative response scored high. The direction of the question is then indicated in the Positive/Negative column.

Questions are presented in rank order by means. Wherever equal means are encountered the smaller standard deviation is ranked highest. Where means and standard deviations are equal they are given equal rank.

In this way the key responses can be seen quickly in priority of response order.

Results are also presented by theme by indicating % of responses falling in each interval. The end of the scale with more than 50% of responses has been underlined and the grouped % shown in order to highlight the respective areas of weight of responses.

Outward Bound Bridging Course - 1981

BRIDGING COURSE EVALUATION QUESTIONNAIRE

RESULTS

(IN RANK ORDER BY MEANS WITH LOWER STANDARD DEVIATIONS TAKING PRECEDENCE ON EQUAL MEAN QUESTIONS. SCORES HAVE BEEN REVERSE WEIGHTED ON NEGATIVE QUESTIONS - SEE POS/NEG COLUMN FOR DIRECTION OF ANSWER)

RANK	Q. NO.	QUESTION	POS./NEG.	$\bar{X}$* (mean)	S (St. Dev.)	Notes
1.	36.	I want to keep improving myself	AGREE	5.33	.37	
2.	21.	I appreciate the help given by my teachers	AGREE	5.25	.43	
3.	8.	I have learnt to take on more responsibilities	AGREE	5.08	.49	
4.	41.	I have enjoyed the outdoor activities	AGREE	5.08	.64	
5.	16.	I appreciate my family more	AGREE	5.08	.86	
6.	48.	I have been glad I had the chance to do this course	AGREE	5.0	.50	
7.	10.	I have become more trustworthy	AGREE	4.92	.64	
7.	14.	I have a more hopeful attitude about my future	AGREE	4.92	.64	
7.	29.	I would rather not study	DISAGREE	4.92	.64	
10.	45.	I have learned more skills in outdoor activities	AGREE	4.9	.64	
11.	26.	I feel I have improved my maths	AGREE	4.9	.76	
12.	30.	I have more faith in my own ability to learn	AGREE	4.83	.47	
13.	32.	I enjoy learning more	AGREE	4.83	.62	
14.	28.	I feel more positive towards my schoolwork	AGREE	4.83	.74	

RANK	Q. NO.	QUESTION	POS./NEG.	$\bar{X}$* (mean)	S (St. Dev.)	Notes
15.	24.	My family are harder to live with	DISAGREE	4.83	.94	
16.	35.	I have learned to live better with others	AGREE	4.75	.59	
16.	43.	I have learned to show initiative	AGREE	4.75	.59	
18.	23.	Things are working out better	AGREE	4.75	.83	
19.	15.	I feel like giving up	DISAGREE	4.75	1.16	ii) Note
20.	1.	Increased happiness with self	AGREE	4.67	.55	
21.	17.	I appreciate my friends more	AGREE	4.67	1.14	iii) Note
22.	2.	I have learnt more about my real self	AGREE	4.58	.76	
23.	22.	I have been able to see my future more clearly	AGREE	4.58	.86	
24.	27.	I feel my teachers are against me	DISAGREE	4.58	.95	
25.	37.	I know how to co-operate more	AGREE	4.5	.41	
26.	7.	I feel more positive towards others	AGREE	4.5	.58	
27.	3.	Others have learnt more about the real me	AGREE	4.5	.7	
27.	6.	I have gained a better understanding of people	AGREE	4.5	.7	
29.	33.	I show my appreciation more	AGREE	4.5	.71	
30.	20.	My family have noticed change for better in me	AGREE	4.5	.82	
30.	25.	I feel I have improved my English	AGREE	4.5	.82	

RANK	Q. NO.	QUESTION	POS./NEG.	$\bar{X}$* (mean)	S (St. Dev.)	Notes
32.	44	I have increased my appreciation of natural environment	AGREE	4.5	1.08	iv) Note
33.	46.	I realise that we sometimes have to do things we don't like	AGREE	4.42	.76	
34.	11.	I have learnt to organise my time better	AGREE	4.42	.86	
35.	5.	I understand what others don't like in me	AGREE	4.4	.76	
36.	38.	I feel more tolerant towards others	AGREE	4.33	.69	
37.	39.	I sit back and let others do things (depend.)	DISAGREE	4.25	.92	
37	47.	I would rather be watching T.V. than doing things	DISAGREE	4.25	.92	
39.	4.	I understand what others like in me	DISAGREE	4.17	.62	
40.	18.	I would rather be on my own (indep.)	DISAGREE	4.08	1.18	
41.	19.	People annoy me more (increased intolerance)	DISAGREE	3.5	1.22	

Notes

i) * means were determined by ascribing values of 1.5 Disagree Strongly

2.5 Disagree

3.5 No difference

4.5 Agree

5.5 Agree Strongly

Hence range is 1.5 - 5.5 and median is 3.5.

ii) High S: without one subject's score $\bar{X}$ = 5.04. S = .66. Rank would be 6.

iii) High S: without one subject's score $\bar{X}$ = 4.95. S = .65. Rank = 7.

iv) High S: without one subject's score $\bar{X}$ = 4.77. S = .62. Rank = 16.

Outward Bound Bridging Course - 1981

Bridging Course Evaluation Questionnaire

Results Summary by Theme

% of Responses

	Q.No.		STRONGLY DISAGREE	DISAGREE	NO DIFF.	AGREE	STRONGLY AGREE
A.		Personal Change					
	1)	Increased happiness with self			8	67	25 (92)
	20)	My family have noticed change for better in me			33	33	33 (67)
	33)	I show my appreciation more			25	50	25 (75)
	43)	I have learned to show initiative			8	58	33 (92)
B.		Self Understanding					
	2)	I have learnt more about my real self			25	42	33 (75)
	3)	Others have learnt more about the real me		8		75	17 (92)
	4)	I understand what others like in me		8	17	75	
	5)	I understand what others don't like in me		8	42	42	8 (50)
C.		Family					
	16)	I appreciate my family more		8		17	75 (92)
	24)	My family are harder to live with	58	25 (84)	8	8	

% of Responses

	Q.No.		STRONGLY DISAGREE	DISAGREE	NO DIFF.	AGREE	STRONGLY AGREE
D.		Social					
	7)	I feel more positive towards others			17	67	17 (83)
	6)	I have gained a better understanding of people			25	50	25 (75)
	35)	I have learned to live better with others			8	58	33 (92)
	37)	I know how to co-operate more			8	83	8 (92)
	38)	I feel more tolerant towards others			33	50	17 (67)
	19)	People annoy me more (increased intolerance)	17	17 (34)	25	33	8 (42)
	17)	I appreciate my friends more	8		8	33	50 (83)
	39)	I sit back and let others do things (depend.)	25	33 (58)	33	8	
E.		Responsibility					
	8)	I have learnt to take on more responsibilities				42	58 (100)
	46)	I realise that we sometimes have to do things we don't like		8	8	67	17 (84)
	11)	I have learnt to organise my time better		8	17	50	25 (75)
	10)	I have become more trustworthy			8	42	50 (92)

% of Responses

	Q.No.		STRONGLY DISAGREE	DISAGREE	NO DIFF.	AGREE	STRONGLY AGREE
F.		School					
	21)	I appreciate the help given by my teachers				25	75 (100)
	27)	I feel my teachers are against me	42	33 (75)	17	8	
	28)	I feel more positive towards my schoolwork			17	33	50 (83)
	30)	I have more faith in my own ability to learn				67	33 (100)
	32)	I enjoy learning more			8	50	42 (92)
	29)	I would rather not study	50	42 (92)	8		
	25)	I feel I have improved my English			33	33	33 (67)
	26)	I feel I have improved my maths			17	25	58 (83)
G.		Future					
	36)	I want to keep improving myself				17	83 (100)
	15)	I feel like giving up	58	25 (83)	8		8
	23)	Things are working out better		8		50	42 (92)
	14)	I have a more hopeful attitude about my future			8	42	50 (92)
	22)	I have been able to see my future more clearly			42	25	42 (68)

% of Responses

Q.No.		STRONGLY DISAGREE	DISAGREE	NO DIFF.	AGREE	STRONGLY AGREE
H.	Outdoor Education Experience					
41)	I have enjoyed the outdoor activities			8	25	67 (92)
45)	I have learned more skills in outdoor activities			8	42	50 (92)
44)	I have increased my appreciation of natural environment	8		8	50	33 (83)
I.	Miscellaneous					
47)	I would rather be watching T.V. than doing things	25	33 (58)	33	8	
48)	I have been glad I had the chance to do this course				50	50 (100)

APPENDIX VI

Coopersmith Self-Esteem Inventory

a) i) Instrument

ii) Purpose

iii) Administration

iv) Presentation of Results

b) Results (Table 8)

c) Results by Subscales (Table 9)

d) Comparison O.B.B.C./2 Australian Studies C.S.E.I. (Table 10)

e) Comparisons - Various Studies and O.B.B.C. (Table 11)

f) Comparisons - O.B.B.C./Learning Disabled Group (Table 12)

g) Individual Profile T_1-T_2 Comparative C.S.E.I. Results (Tables 13-24)

Outward Bound Bridging Course - 1981

The Instrument: COOPERSMITH SELF ESTEEM INVENTORY

The Coopersmith Self Esteem Inventory (C.S.E.I.) (Coopersmith 1967) is a self report inventory consisting of 50 items (with an additional 8 items which constitute an interspersed lie scale). The items are divided into four subscales 1) General Self (26 items); 2) Social Self-Peers (8 items); Home-Parents (8 items); School-academic (8 items).

The sentences require only a "Like me" or "unlike me" response and are in themselves short and of easy diction.

Validity and reliability and age applicability are good (see "Purpose" following) an important feature is that "unlike many American personality measures aimed at this age group, the wording of the items and the content areas they tap are sufficiently universal to be applicable in the Australian context" (Edgar et al, 1974. p.56).

One of its major strengths for the purposes of this study are its subscales. Most reviewers and researchers in the decades since Coopersmith (1959) have had to conclude that people are capable of perceiving themselves, and accordingly acting, differently in terms of relatively different dimensions of the self and of self-esteem (e.g. West, Fish & Stevens 1980 and Winne, Marx & Taylor 1977). The particular advantage of the C.S.E.I. is the appropriateness (and high validity on factor-analysis (Kokenes, 1978), (Edgar et al, 1974), of the particular four subscales, as follows.

i) General Self - The 26 items of this subscale were found through factor-analysis (Kokenes, 1978) to load into 3 self related factors: Perceived Inadequacy of Self (the most powerful & persuasive factor); Rejection of Self; and Perceived adequacy of Self (pervasive but least powerful).

Among the sub-scales General Self has also been found (with School/ Academic), most reliable over time (e.g. T = .46 (f) .64 (m) = .55 (m/f) for 15 year olds over 3 years - Rubin, 1978).

ii) Social Self-Peers - Five of these 8 items (and 3 additional items) loaded into 2 factors through factor analysis (Kokenes, 1978). These factors were Social Self and Peer Success (most powerful and pervasive) and Social Self and Peer Failure.

This factor has been found to be most affected by learning disabilities resulting in special class placement (Rosenberg & Gaier, 1977). (Not the situation however with the students in this study). Reliability over 3 years is r =.45(m), .55(f) = .50 (m/f) for 15 year olds (Rubin 1978).

iii) Home-Parents - These 8 items attempt to test the effects of the impact of significant family and home environmental factors on self-esteem. Seven of the items (+ 3 additional factors) loaded into either Good Parent-Home Relationships or Poor Parent-Home Relationships on factor analysis (Kokenes, 1978). It is significant however that the power and pervasiveness of the loadings varied considerably over grades and by sexes. Also this subscale appears to be more sensitive to current situations in the parent-home context. (Douvan and Gold 1966 (p579) & Connell et al 1975.) This may be why this subscale has been found least reliable over time (12 year olds r = .25 (m) .22 (f) = .24 (m/f): 15 year olds r = .41 (m) .27 (f) = .34 (m/f) - Rubin 1978).

School Academic - This 8 item scale is of particular value in the evaluation of the achievement of the objectives of a programme such as the Bridging Course. Although the research results are not unanimous there is substantial support for the notion that the factors covered by this subscale have a very significant relationship with academic achievement (e.g. Brookover et al 1967).

Five of the items (and two additional factors) loaded into one of two factors: School-Academic Success and School-Academic Failure. It is noteworthy that with five exceptions, females at all grade levels generated only School Academic Failure while males at all grade levels generated only the factor, School Academic Success (Kokenes, 1978, p.152).

Not unpredictably, evidence exists for a strong positive correlation between this subscale and learning disabilities. (Rosenberg & Gaier, 1977)

This subscale has proven the most reliable over time. (Over 3 years, for 15 year olds r = .56 (m); .54 (f) = .55 (m/f).

Lie Scale - These 8 items are not scored as part of the inventory and are used only to discard suspected invalid inventories.

Application of the lie scale is arbitrary among users. Lie Scale scores of 5 and above seem to attract either attention or lead to omission of the subject's scores (e.g. Primavera et al, 1974).

Unfortunately validity for the lie scale is questionable, reliability is the lowest of all scales (over 3 yrs r = .23 for 12 year olds (m/f) and .35 for 15 year olds (m/f) - Rubin 1978, p432). (As lie scales still have poorly defined purposes, for example they may in fact be measuring test-taking attitudes, rather than deceit, or as has been found, (and as seems more likely in this study) they may simply be measuring "lack of insight" (Eysenck, Nias & Eysenck, 1971). In this study it is significant that the only students scoring over an arbitrary 5 on the scale were the least intellectually able students.

On Australian data there is evidence that this measure does not operate as it does in American samples (e.g. low alpha coefficient (.38) - see Edgar et al, 1974).

Under all of these circumstances lie scale scores in this study were not given any emphasis.

The Purpose:

The recent growth in research into aspects of the self has left the potential researcher in this area with an increasing number of instruments from which to choose.

Unfortunately, despite recent attempts to clarify and distinguish such concepts as "self image", "self-concept" and "self esteem" (Calhoun & Morse, 1977; & Germain 1978) there remains some lack of precision and considerable overlap in the tests available.

As influences on self-concept are at the core of many of the objectives of Outward Bound and other experiental outdoor education programmes much of the investigation into this area has involved attempts at evaluating effects in this field. In the course of this pursuit many instruments have been used.

The Tennessee Self Concept Scale (Fitts, 1965) has proven popular for evaluating both Outward Bound programmes (e.g. Whetmore 1972 & Nye 1975) and Outward Bound adaptive programmes (e.g. Heaps and Thorstenson (1972) & Fornander (1974)). Other investigators have used other instruments such as the Semantic Differential Test (e.g. Richards 1966) and the Rosenberg Scale of Self Esteem (e.g. Kaplan, 1974) and the adolescent Self-image Questionnaire (e.g. Barter 1966). For many reasons, mainly in the search for relevance, appropriateness and local requirement fulfilment other researchers have used techniques ranging from student anecdotal responses and questionnaires (e.g. Copp, Pierson & Sargent, 1972) to interviews and questionnaires (e.g. Hawkes et al 1969).

Some investigators have concluded that there are no satisfactory instruments for evaluating self-esteem and other dimensions in the Outward Bound context and so have become involved in variable identification and instrument construction (e.g. White 1974) while others have proceeded beyond this point to develop and prove specific instruments (e.g. the "Inventory of Outward Bound Effec "(Self esteem scale r = .77) - (Smith, Gabriel Anderson 1973)) or develop techniques for evaluating individual feedback responses and arrive at statistical data (Lovett, 1971).

Unfortunately none of these methods of testing appeared suitable for this particular study aimed at increasing school achievement through the Outward Bound process.

Other approaches assessed took two paths. Either a broad spectrum self-concept/self-esteem standardised test which has not been used as yet in any Outward Bound evaluation (e.g. the Piers-Harris Children's Self-concept Scale - (Piers 1969)) (which may prove equally unsatisfactory), or refine the investigation only to effects on academic self-image by using tests such as Jarker-Lunn's "Academic Self Image Scale", or Brookover's "Self Concept of Academic Ability Scale" or the Kilpatrick & Cantril "Self-Concept of Ability Self Anchoring Scaling Technique" (see Cohen, 1978).

Such a narrow approach also seemed unnecessarily limited.

It was against this background that the Coopersmith Self Esteem Inventory (Coopersmith 1967) was chosen for the following reasons:

a) The literature in the self concept/self esteem area shows this to be a difficult and uncertain aspect of psychological functioning to measure in a reliable fashion. Under these circumstances a well proven, and well established instrument was likely to give the most reliable results. Reviewers, while not entirely uncritical have indicated that the instrument is probably the best one available to measure self-esteem (see for example Sears 1969 and for effective analysis of C.S.E.I. with Australian data see Edgar et al 1974).

The test-re-test reliability reported by Coopersmith is generally supported by other researchers particularly for the age group of the study 14/15 years at between .70 over 3 yrs and .88 over 5 weeks (the approximate period of the study). For some comparisons see the following table:

Coopersmith Self Esteem Inventory

Test-Retest Reliability: Some Comparisons

TABLE 7

Reference	Subjects	N	M/F	Period to re-test	Reliability Coefficient
Coopersmith (1967) p10	5th grade	30	M/F	5 weeks	.88
Coopersmith (1967) p10	Sample of 1748	56	M/F	3 years	.70
Klass & Hodge (1978) p704	7th grade	350	M/F	N/A	(HOYT).86
Rubin (1978) p432)	Age 12	109	M	3 years	.35
	Age 12	82	F	3 years	.51
	Age 15	106	M	3 years	.58
	Age 15	83	F	3 years	.70

Although there is a shorter 25 item version available whose total scores are reported to correlate at .86 (Argyle & Lee, 1972) and at .93 on Australian data (Edgar et al, 1974) with the full version, the full 58 item test was used in order to get the best possible results and the fullest information from the sub-scales.

In addition to Coopersmith's own justification of the inventory (Coopersmith 1967) a number of other researchers have investigated the inventory and reported favourably on its construct validity (e.g. Simon 1972). In an impressive report on her factor analytic study of the C.S.E.I. using 7,593 children Kokenes (1978), reports that "the S.E.I. is a factorially complex instrument. The factors which emerged in this study confirm the construct validity of the subscales proposed by Coopersmith as measuring sources of self esteem" (p154). In the Australian context detailed analysis has led to the conclusion that "the Coopersmith Self-esteem Inventory is a promising measuring instrument which is worthy of utilization in future Australian research" (Edgar et al, 1974, p62).

b) The subscales are effective measures of the sources of self-esteem and so provide more specific insights into any intervention effects in a programme such as this Bridging Course which is multidimensional in its approaches.

c) The C.S.E.I. has not been utilized in Outward Bound research where other measures such as the Tennessee Self Concept Scale have predominated. However the C.S.E.I. seemed to hold promise for studies of the Outward Bound process in two particular cases, a) where the ages of participants were younger (e.g. 10-17 years), or where the sub-scale choices preferably included assessments of school influences on self concept or self-esteem. (In this area Weider's 1975 & 1976, use of the C.S.E.I. on school dropouts attending Outward Bound, for example, proved effective)

Administration:

The Coopersmith S.E.I. was administered at time one soon (12 hours) after students arrived at the Outward Bound School. It was presented to groups of 4 students and read aloud to them and all students kept to the same pace of answering to ensure full comprehension of the questions and that there could not be any extraneous factors such as competition to finish.

The inventory was presented again under similar conditions on the last day of the course (about 18 hours before departure). On each occasion careful briefings attempted to ensure good testing conditions.

Presentation of Results

Raw scores are multiplied by 2 for each subscale in order to bring the total score out of 100. Lie scale scores are indicated separately.

Time 1 administration of the C.S.E.I. was 12 hours after arrival at the Australian Outward Bound School and therefore before any effects of intervention (though undefined expectation effects are always a possibility of uncertain strength).

Time 2 administration was on the last day of the 6 week programme.

In addition to basic data such as means and standard deviations for each time and means of the differences, Kuder Richardson Formula 21 coefficients of reliability were calculated as well as standard errors of measurement.

It was considered suitable to work on the assumption that the lapsed time between T_1 and T_2 under normal living and school conditions was unlikely to produce any experiences that would lead to significant changes in self-esteem. (The course was conducted approximately in the middle part of the middle term in 2nd and 3rd forms (years 9 and 10) of high school.

As matched paired control groups would be very difficult to find for such a group, and as any other form of control group would introduce inherent weaknesses in the experimental design the above assumption was used to conclude that the control group for this group is themselves tested at time 1. The extension of this assumption is that each student then has a "perfectly matched ghost pair" existing over those 6 weeks experiencing no significant change. Despite its imperfections this allowed the mean of time 1 to be treated as a control point. Formula J(s) was devised to allow interpretation of shifts in terms of standard deviations from the (control mean) norm. C.S.E.I. Individual Profile Comparative T_1-T_2 Sheets were prepared to enable visual evaluation of individual question changes in response (+ or -) and individual scores and changes to be seen in the pattern of the particular subject. This presentation is part of the case study element of the investigation.

Internal Consistency reliability for the Total S.E.I. and the subscales has been determined by the Kuder Richardson Formula 21. Subscales have been analysed in terms of means, and standard deviations, while Standard Errors of Measurement have been calculated as well as the SEM's expressed as a % of the subscale to allow comparisons between subscales with different numbers of items.

Tables are presented of various overseas and Australian studies to provide easy comparison between the O.B.B.C. study results and other findings on reliabilities and results.

A "t" test has been employed for determining significance of T_1-T_2 changes.

Various correlation coefficients have been calculated using the Pearson Product-Moment Correlation Coefficient formula and matrices to test the relationships between self-esteem and achievement.

Outward Bound Bridging Course - 1981

Coopersmith Self Esteem Inventory Results

TABLE 8

Name	T1 Score	T1 L	T2 Score	T2 L	T1 - T2	T1 - T2 L	J(S)
Abdullah	52	5	64	2	+12	(-3)	+ .82
Bennett	56	6	66	4	+10	(-2)	+ .69
Danny	78	3	86	3	+ 8	(0)	+ .55
Fabian	50	0	52	0	+ 2	(0)	*0
Gary	62	1	62	2	0	(+1)	*0
Jerry	48	5	88	7	+40	(+2)	+2.74
Joe	40	3	48	2	+ 8	(-1)	+ .55
John	84	3	78	1	- 6	(-2)	- .41
Mario	80	1	66	2	-14	(+1)	- .96
Peter	70	3	62	3	- 8	(0)	- .55
Shayne	40	2	88	2	+48	(0)	+3.30
Stephen	56	2	68	1	+12	(-1)	+ .82
					Σ +140	Σ +4	
	716	34	828	29	Σ - 28	Σ -9	
	$\bar{X}$ 59.6	$\bar{X}$ 2.83	$\bar{X}$ 69	$\bar{X}$ 2.416	Σwd +112	Σ wdL -5	
					$\bar{X}$wd + 9.3	$\bar{X}$wdL - .416	
	S 14.556		S 12.79				
	r .895		r .878				
	SEM 4.72		SEM 4.47				

T1 = Time 1 - administered 12 hours after arrival
T2 = Time 2 - administered last day of 6 week programme
L = Lie Scale indicator
S = Standard deviation
$\bar{X}$ = Mean
r = Kuder Richardson Formula KR21 coefficient of reliability.
SEM = Standard Error of Measurement
$\bar{X}$wd = Mean the weighted differences on T1 & T2
*0 = Score falls within S.E.M. on T1 & so not significant
$\bar{X}$wdL = Mean of the weighted difference on lie scale (T1 - T2)

$J(S) = \frac{\bar{X}wd}{S(T1)}$ = Individuals weighted differences divided by S of group on Time 1 (as a control). This gives the individual's difference from the groups original mean expressed in standard deviations.

Outward Bound Bridging Course 1981

Coopersmith Self Esteem Inventory Results

By Sub-Scales

TABLE 9

	General Self		Social Self		Home Parents		Lie Scale		School Academic		TOTAL	
Name	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Abdullah	26	28	14	16	8	12	10	4	4	8	52	64
Bennett	32	34	12	8	6	10	12	8	6	14	56	66
Danny	42	40	16	16	14	14	6	6	6	16	78	86
Fabian	24	24	10	12	12	12	0	0	4	4	50	52
Gary	36	26	10	14	12	14	2	4	4	8	62	62
Jerry	22	42	8	14	10	16	10	14	8	16	48	88
Joe	22	22	12	12	2	2	6	4	4	12	40	48
John	42	38	14	14	14	14	6	2	14	12	84	78
Mario	44	34	10	8	14	12	2	4	12	12	80	66
Peter	36	28	10	8	16	14	6	6	8	12	70	62
Shayne	20	42	8	16	8	16	4	4	4	14	40	88
Stephen	32	36	12	8	4	12	4	2	8	12	56	68
$(\bar{X})$ Means of subscales	31.5	32.83	11.33	12.16	10.0	12.33	5.66	4.83	6.83	11.66	59.66	69
(S) Standard deviations	8.25	6.76	2.35	3.21	4.24	3.54	3.45	3.41	3.21	3.35	14.56	12.79
(r) Kuder Richardson rel. Coeff. (21)	.83	.75	.43	.76	.84	.83	.76	.76	.75	.88	.90	.88
(SEM) Standard error of measurement	3.36	3.38	1.78	1.56	1.67	1.48	1.69	1.69	1.87	1.61	4.72	4.5
(SEM%) SEM expressed as % of subscale	13%	13%	22%	19%	21%	18%	21%	21%	23%	20%	4.7%	4.5%

Outward Bound Bridging Course 1981

TABLE 10

Comparison of O.B.B.C. results with 2 Australian Studies of Coopersmith S.E.I.*

	OBBC		STUDY A**						O.B.B.C. KR21		STUDY B***
	T1	T2	TOTAL N=816	HIGH S.E.I. N=82		LOW S.E.I. N=62		ALPHA COEFFICIENT	T1	T2	Internal Consistency Reliability Coefficients
Subscale	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}1$	$\bar{X}2$	$\bar{X}1$	$\bar{X}2$	a	r =	r =	
General	31.5	32.83	32.9	44.6	42.8	21.2	21.8	.78	.83	.75	.79
Social Self-Peers	11.33	12.16	10.96	14.4	14.4	7.0	7.6	.63	.43	.76	.74
Home Parents	10.0	12.33	10.46	15.8	14.4	4.6	5.8	.74	.84	.83	.72
School Academic	6.83	11.66	8.26	13.2	12.0	4.4	5.2	.58	.75	.88	.54
Lie Scale	5.66	4.83	10.94	-	-	-	-	.38	.76	.75	.09
TOTAL S.E.I.	59.66	69	62.58	87.4	83.6	37.2	40.4	.87	.90	.88	.86

* As reported by Edgar et al. 1974

** Study A - N = 816 Victorian Technical & High School Students - Age Range 12-14 years - from various socioeconomic areas. Test retest over 5 month period.

*** Study B - N = 107 (46m/61F) - Victorian suburban High School. Age Range 13-14 years - From middle class socio-economic area.

Outward Bound Bridging Course - 1981

Coopersmith Self Esteem Inventory

Comparisons of means & standard deviations of results found by Coopersmith, some other researchers, and the 1981 O.B. Bridging Course (T1 & T2)

TABLE 11

Reference	Subjects	N	M/F	$\bar{X}$	S.D.
1) Coopersmith (1967) (p10)	5/6th grade	44	M	81.3	12.2
2) Coopersmith (1967) (p10)	5/6th grade	43	F	83.3	16.7
3) Coopersmith (1969) (p10)	?	1748	M	70.1	13.8
			F	72.2	12.8
4) Primavera et al (1974) (p214)	5/6th grade	146	63M	69.34	13.27
			83F	70.76	14.31
5) Simon & Simon (1975) (p98)	5th grade	87	45M	70.80	12.43
			42F	69.62	12.80
6) Klass & Hodge (1978) (p704)	7th grade	350	M/F	82.07	7.91
7) Rosenberg & Gaier (1977) (p495)	7/8th grade (average S_s)	47	M/F	68.06	N/A
REMEDIAL GROUP RESULTS					
8) Rosenberg & Gaier (1977) (p495)	7/8th grade	23	M/F	66.11	N/A
9) O.B. Bridging Course 1981 (T1)	9/10th grade	12	M	59.6	14.56
10) O.B. Bridging Course 1981 (T2)	Same group	"	"	69.0	12.79

Note: differences between mean scores for boys & girls have generally been found not to be significant e.g. in examples 1) & 2) above $F = .80$ $p < .50$. In example 4) "t" = .646, d.f. = 162, $p > .05$. 5) "t" = .436, d.f. = 85, $p > .10$.

Outward Bound Bridging Course - 1981

Comparison of O.B. Bridgers Course T1 Coopersmith S.E.I.

with Rosenberg & Gaier (1977) (p495)

TABLE 12

Rosenberg & Gaier (1977)	General Self Group $\bar{X}$	Social Self Peer $\bar{X}$	Home Parent $\bar{X}$	School Academic $\bar{X}$	Total Score $\bar{X}$
Learning Disabled N = 23	36.08	10.15	10.46	7.42	66.11
"Average N = 47	37.73	12.15	10.45	7.73	68.06
O.B. Bridgers 1981 (T1) N = 12	31.5	11.33	10.0	5.66	59.66
O.B. Bridgers 1981 (T2	32.83	12.16	12.33	11.66	69.00

Note: Rosenberg & Gaier (1977) "Average" group - 47 male 7th & 8th grade (12-15 year olds) - I.Q.'s 80-120 - from two suburban school districts Erie Country, New York.

Learning Disabled group - 23 male 7th & 8th grade (12-15 yrs) - I.Q. 80-120 from some two schools but in special classes because of academic failure.

O.B. Bridger group - 12 male, 9th & 10th grade 14-15 yrs - I.Q.'s unknown - from a low S.E.S. inner city Catholic school in Sydney.

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ABDULLAH

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	+	2	+	+	3	+	+	4	+	+	5	+	+	6	+	−	7	−	−
8	+	+	9	−	−	10	−	+	11	+	+	12	−	+	13	−	−	14	−	+
15	−	−	16	−	−	17	−	−	18	+	+	19	+	+	20	−	−	21	−	+
22	−	−	23	+	+	24	+	+	25	+	+	26	−	−	27	+	+	28	−	−
29	−	+	30	−	−	31	−	−	32	+	+	33	−	+	34	+	−	35	−	−
36	+	−	37	+	+	38	+	+	39	+	+	40	+	+	41	+	−	42	+	−
43	+	−	44	+	+	45	−	+	46	+	+	47	+	+	48	+	−	49	−	+
50	+	+	51	−	−	52	+	−	53	−	+	54	−	−	55	−	+	56	+	+
57	+	−	58	−	+															

	General Self	Social Self	Home Parents	Lie Scale	School Academics	
Time 1	13 +	7 +	4 +	5 +	2 + x2	52
Time 2	14 +	8 +	6 +	2 +	4 + x2	64
	+1	+1	+2	−3	+2	+12

92

93

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P.80

BENNETT

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	+	+	2	+	+	3	+	−	4	+	+	5	+	+	6	−	−	7	−	+
8	−	+	9	−	−	10	+	+	11	+	+	12	−	−	13	+	−	14	+	+
15	+	+	16	−	+	17	+	−	18	−	−	19	+	+	20	+	+	21	+	+
22	−	−	23	+	+	24	+	+	25	+	+	26	−	+	27	+	+	28	+	+
29	+	+	30	−	−	31	−	−	32	+	−	33	−	+	34	−	+	35	−	+
36	+	+	37	+	+	38	−	+	39	+	+	40	−	−	41	+	+	42	−	−
43	−	−	44	−	−	45	+	+	46	+	−	47	+	+	48	+	[illegible]	49	−	+
50	+	+	51	+	+	52	−	−	53	−	−	54	−	−	55	+	−	56	−	+
57	+	+	58	+	+															

	General Self	Social Self	Home Parents	Lie Scale	School Academics	
Time 1	16 +	6 +	3 +	6 +	3 + 2	56
Time 2	17 +	4 +	5 +	4 +	7 + 2	66
	+1	−2	+2	−2	+4	+10

94

95

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P.81

DANNY

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	+	+	2	+	+	3	+	+	4	+	+	5	+	+	6	−	−	7	+	+
8	+	−	9	−	+	10	+	+	11	+	+	12	−	−	13	−	−	14	−	+
15	+	+	16	+	+	17	+	−	18	+	+	19	+	+	20	−	−	21	+	+
22	+	[illegible]	23	+	+	24	+	+	25	+	+	26	+	+	27	+	+	28	+	+
29	+	+	30	−	[illegible]	31	−	+	32	+	+	33	+	+	34	−	−	35	−	+
36	+	+	37	+	+	38	+	+	39	+	+	40	+	+	41	+	+	42	−	+
43	+	+	44	[illegible]	+	45	+	−	46	+	+	47	+	+	48	−	[illegible]	49	−	+
50	+	+	51	+	+	52	−	−	53	+	+	54	+	+	55	+	+	56	−	+
57	+	+	58	+	+															

	General Self	Social Self	Home Parents	Lie Score	School Academics	
Time 1	21 +	8 +	7 +	3 +	3 + x2	78
Time 2	20 +	8 +	7 +	3 +	8 + x2	86
	−1	0	0	0	+5	+8

96

97

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FABIAN

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	−	2	−	−	3	−	−	4	−	+	5	+	−	6	−	−	7	−	−
8	+	+	9	−	−	10	−	−	11	+	+	12	+	+	13	−	−	14	−	−
15	−	−	16	+	+	17	−	−	18	−	−	19	+	+	20	−	−	21	−	−
22	−	−	23	+	+	24	+	+	25	+	+	26	+	+	27	−	−	28	−	−
29	−	−	30	+	+	31	+	+	32	−	−	33	+	+	34	−	−	35	−	−
36	−	−	37	+	+	38	−	+	39	+	+	40	−	−	41	−	−	42	+	+
43	−	−	44	+	+	45	−	−	46	+	+	47	−	+	48	−	−	49	+	+
50	+	+	51	+	+	52	+	−	53	+	+	54	+	+	55	−	−	56	−	−
57	−	−	58	+	+															

	General Self	Social Self	Home Parents	Lie Scale	School Academics	
Time 1	12 +	5 +	6 +	0 +	2 + ×2	50
Time 2	12 +	6 +	6 +	0 +	2 + ×2	52
	0	+1	0	0	0	+2

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GARY

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	−	2	+	+	3	−	−	4	+	+	5	+	+	6	−	−	7	−	−
8	+	+	9	−	+	10	+	−	11	+	+	12	+	+	13	−	−	14	−	−
15	+	+	16	+	−	17	−	−	18	−	+	19	+	+	20	−	−	21	+	+
22	+	−	23	+	+	24	+	+	25	+	+	26	+	+	27	−	+	28	−	−
29	+	+	30	−	−	31	+	−	32	−	−	33	+	+	34	−	−	35	−	−
36	+	+	37	+	+	38	+	−	39	+	+	40	−	−	41	−	−	42	+	+
43	+	−	44	−	−	45	−	−	46	+	+	47	+	+	48	+	+	49	−	+
50	+	+	51	+	+	52	+	+	53	−	+	54	−	+	55	−	−	56	−	+
57	−	−	58	+	+															

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	General Self	General Self	Home Parent	Law Grade	School Academics	
Time 1	18 +	5 +	6 +	1 +	2 + +2	62
Time 2	13 +	7 +	7 +	2 +	4 + +2	62
	−5	+2	+1	+1	+2	0

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JERRY

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	+	2	−	+	3	−	−	4	+	+	5	+	+	6	+	+	7	+	+
8	+	+	9	+	+	10	+	+	11	−	−	12	−	+	13	+	+	14	+	+
15	−	−	16	−	+	17	+	+	18	−	+	19	+	+	20	−	−	21	+	+
22	+	+	23	+	+	24	+	+	25	+	+	26	−	+	27	+	+	28	−	+
29	+	+	30	+	+	31	−	+	32	−	+	33	+	+	34	−	+	35	−	+
36	+	+	37	−	+	38	−	+	39	+	+	40	−	+	41	+	+	42	−	+
43	+	+	44	−	−	45	−	−	46	+	+	47	+	+	48	+	+	49	−	+
50	−	+	51	−	−	52	−	+	53	−	+	54	+	+	55	−	+	56	+	+
57	−	+	58	−	+															

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103

	General Self		Social Self		Home/Parents		Lie Scale		School/Academics		
Time 1		11 +		4 +		5 +		5 +		4 + ×2	48
Time 2		21 +		7 +		8 +		7 +		8 + ×2	88
		+ 10		+ 3		+ 3		+ 2		+ 4	+ 40

JOE

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	−	2	+	+	3	−	−	4	+	−	5	+	+	6	−	+	7	−	+
8	+	+	9	−	−	10	−	−	11	+	+	12	−	−	13	+	+	14	−	+
15	+	+	16	+	+	17	−	+	18	+	+	19	−	−	20	+	−	21	+	+
22	−	+	23	+	+	24	+	−	25	+	+	26	−	−	27	−	−	28	−	+
29	−	−	30	−	−	31	−	−	32	−	+	33	−	−	34	−	−	35	−	+
36	−	+	37	+	−	38	−	−	39	+	+	40	−	−	41	−	−	42	−	−
43	−	−	44	−	−	45	+	+	46	+	+	47	−	−	48	−	−	49	−	+
50	+	+	51	+	−	52	−	−	53	−	−	54	−	−	55	+	−	56	+	−
57	−	−	58	+	+															

	General Self	Social Self	Academic Performance	Lie Scale	Social Academics	
Time 1	11 +	6 +	1 +	3 +	2 + ×2	40
Time 2	11 +	6 +	1 +	2 +	6 + ×2	48
	0	0	0	−1	+4	+8

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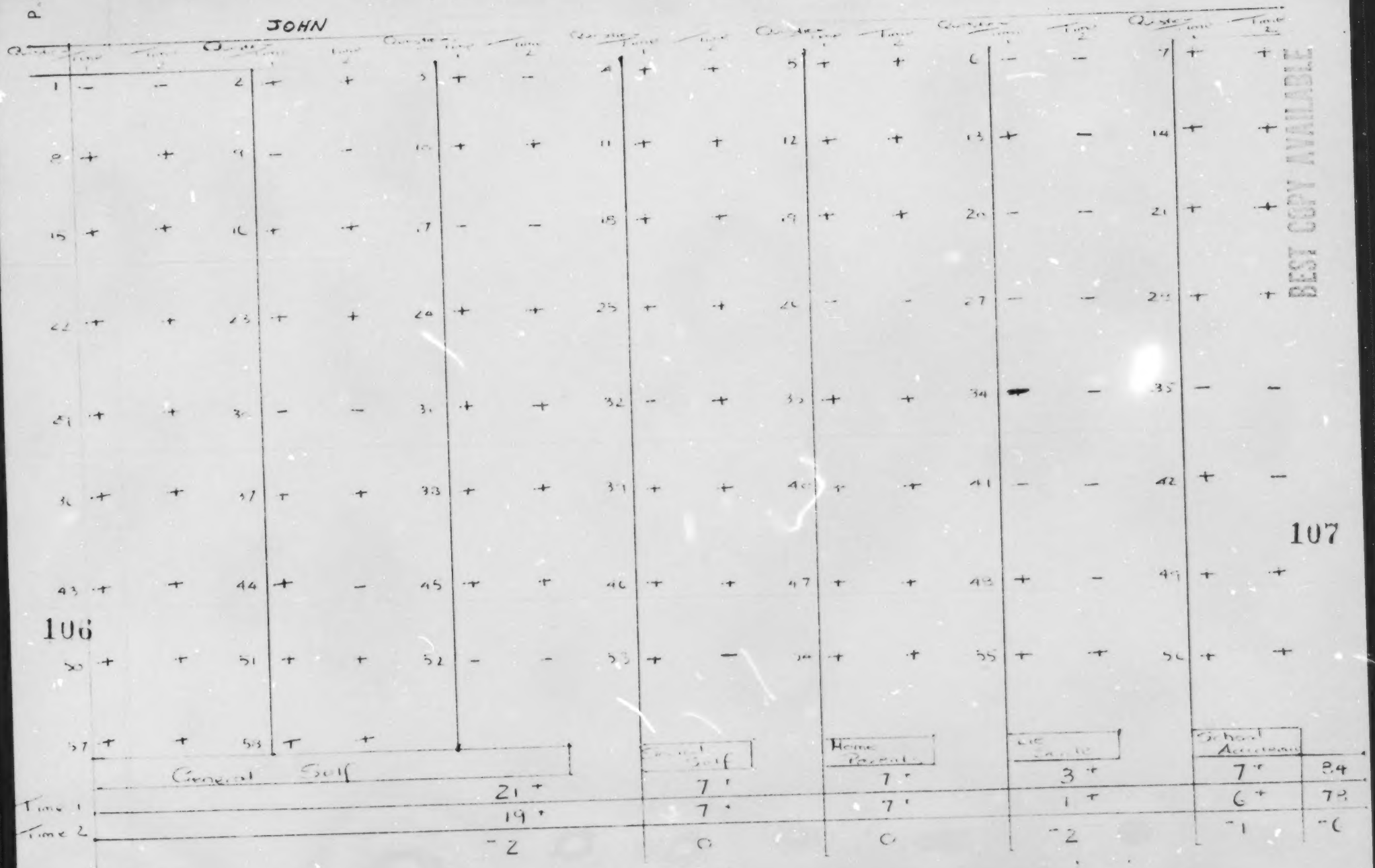
P.86

JOHN



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Mario

Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2	Q. no.	Time 1	Time 2
1	−	−	2	+	+	3	+	+	4	+	+	5	+	+	6	−	−	7	+	+
8	+	+	9	+	−	10	+	+	11	+	+	12	+	+	13	−	−	14	+	+
15	−	−	16	+	−	17	−	−	18	−	−	19	+	+	20	−	−	21	+	+
22	+	+	23	+	+	24	+	+	25	+	+	26	+	−	27	−	+	28	−	−
29	+	+	30	+	−	31	+	+	32	−	−	33	+	+	34	−	−	35	−	−
36	+	+	37	+	+	38	+	−	39	+	+	40	+	+	41	−	−	42	+	+
43	+	−	44	−	−	45	+	+	46	+	−	47	+	+	48	−	−	49	+	+
50	+	+	51	+	+	52	+	+	53	−	−	54	−	−	55	+	+	56	+	+
57	+	+	58	+	+															

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	General Self	Social Self	Home Parents	Lie Scale	School Academic	
Time 1	22 +	5 +	7 +	1 +	6 + ×2	80
Time 2	17 +	4 +	6 +	2 +	6 + ×2	66
	−5	−1	−1	+1	0	−14

Peter

P.88

Q. No.	Time 1	Time 2	Q. No.	Time 1	Time 2	Q. No.	Time 1	Time 2	Q. No.	Time 1	Time 2	Q. No.	Time 1	Time 2	Q. No.	Time 1	Time 2
1	−	−	2	+	+	3	+	+	4	+	+	5	+	+	6	−	−	7	−	−
8	−	−	9	−	−	10	+	−	11	−	−	12	+	−	13	+	−	14	−	+
15	+	+	16	−	−	17	−	−	18	−	−	19	+	+	20	−	−	21	+	+
22	−	−	23	+	+	24	+	+	25	+	+	26	+	+	27	+	+	28	−	−
29	+	+	30	−	−	31	−	−	32	−	−	33	+	+	34	−	+	35	−	+
36	+	+	37	+	+	38	+	+	39	+	+	40	+	+	41	−	+	42	+	+
43	+	+	44	+	−	45	+	−	46	+	−	47	+	+	48	+	−	49	+	+
50	+	+	51	+	+	52	+	+	53	+	+	54	+	+	55	−	−	56	+	+
57	+	+	58	+	+															

	General Self	Social Self	Home [illegible]	[illegible]	School Ability	
Time 1	18 +	5 +	8 +	3 +	4 +	70
Time 2	14 +	4 +	7 +	3 +	6 +	62
	−4	−1	−1	0	+2	−8

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SHRYNE

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	−	+	2	+	+	3	−	−	4	−	+	5	+	+	6	−	−	7	−	−
8	+	+	9	−	+	10	−	+	11	+	+	12	−	+	13	−	+	14	+	+
15	+	+	16	−	+	17	−	−	18	+	+	19	+	+	20	−	−	21	+	+
22	−	+	23	+	+	24	+	+	25	+	+	26	−	+	27	−	−	28	−	+
29	+	+	30	−	+	31	−	+	32	−	+	33	+	+	34	+	−	35	−	+
36	−	+	37	−	−	38	−	+	39	−	+	40	−	+	41	+	−	42	−	+
43	−	+	44	−	−	45	−	−	46	+	+	47	+	+	48	−	−	49	−	+
50	+	+	51	+	+	52	−	+	53	−	+	54	−	+	55	−	+	56	−	+
57	+	+	58	+	+															

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	General Sect	Social Sect	Home Relations	Lic Section	School Accelerants	
Time 1	16 +	4 +	4 +	2 +	2 +	40
Time 2	21 +	8 +	8 +	2 +	7 +	88
	+ 11	+ 4	+ 4	0	+ 5	+ 48

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P. 90

STEPHEN

Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2	Question	Time 1	Time 2
1	+	+	2	+	−	3	−	−	4	+	+	5	−	+	6	−	+	7	+	+
8	−	+	9	−	−	10	+	+	11	+	+	12	−	+	13	+	−	14	+	+
15	−	−	16	−	−	17	+	+	18	+	−	19	+	+	20	−	−	21	+	+
22	−	+	23	+	+	24	+	+	25	+	+	26	−	−	27	+	−	28	−	−
29	−	+	30	+	+	31	+	+	32	−	−	33	+	+	34	−	−	35	−	−
36	−	−	37	+	+	38	+	+	39	+	+	40	−	+	41	−	−	42	+	+
43	+	+	44	−	−	45	−	+	46	+	−	47	−	+	48	−	−	49	−	+
50	+	−	51	+	+	52	+	+	53	−	−	54	−	−	55	−	−	56	−	+
57	+	+	58	+	+															

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	General Self	Social Self	Home Threats	Lie Scale	School Academics	
Time 1	16 +	6 +	2 +	2 +	4 + ×2	56
Time 2	18 +	4 +	6 +	1 +	6 + ×2	68
	+2	−2	+4	−1	−2	+12

APPENDIX VII

High School Personality Questionnaire

a) i) Instrument (and Tables 25A and 25B)

ii) Purpose

iii) Administration

iv) Presentation of Results

b) Group Test Profile Forms A(T_1) and B(T_2) (Table 26)

c) Raw Score Results Form A(T_1) (Table 27)

d) Raw Score Results Form B(T_2) (Table 28)

e) Analysis of Sten Differences T_1-T_2 (by factors) (Table 29)

f) Tests of Significance T_1 and T_2 (Table 30)

g) Tests of Difference T_1-T_2 (Tables 31A, 31B and 31C)

h) Factor B Results (Table 32)

i) Individual Sten Profiles T_1 and T_2 (Profiles 1-12)

Outward Bound Bridging Course - 1981

Instrument: THE JUNIOR-SENIOR HIGH SCHOOL PERSONALITY QUESTIONNAIRE

The H.S.P.Q. first appeared in 1953 and has undergone a number of revisions before the 1968/69 version used in this study. The manual has also undergone considerable revision up to the current 1975 manual.

The questionnaire is designed to measure 12 of the 16 factors appearing on Cattell's Sixteen Personality Factor Questionnaire (Cattell and Eber, 1962) (and also two second order factors not used in this study).

The test comes in four forms; A & B, each of 140 questions, and shorter versions C & D which were not used in this study. In forms A & B, each of the 14 factors has 10 questions which each have three possible answers.

In developing the H.S.P.Q. Cattell's basic concern has been to establish source personality traits. The process of factor analysis employed utilizes oblique factors rather than orthogonal factors (such as Eysenck). This means that the latter factors are not mathematically independent but they are instead, to varying extents, correlated.

The claim made by the test is that it "covers all the major dimensions factor analytically demonstrable in any attempt to describe individual differences comprehensively" (Cattell and Cattell, 1975,p. 3). It is designed as one of a series of tests which theoretically allow subjects to be tested on consistent factors through infancy (the Pre-School Personality Questionnaire - P.S.P.Q.), ages 6-8 (Early School Personality Questionnaire - E.S.P.Q.), ages 8-12 (the Children's Personality Questionnaire - C.P.Q.), ages 12-18 (H.S.P.Q.) and post high school/adulthood (the 16PF).

The claim that the H.S.P.Q. uses "the same unitary personality concepts as the C.P.Q. and the 16 PF" (Cattell & Cattell, 1975, p. 3) has however been challenged with the charge that "only 7 of the 12 factors could be 'unambiguously' matched with variables on the 16PF and the average correlation for these factors was .48" (Buros, 1972, p. 207).

The test is scored objectively by templates and raw scores converted to standard ten (sten) scores according to the norms supplement, for presentation on individual student profile sheets. Each form has its own norms.

Unfortunately the equivalence of the alternative forms poses some difficulty. The level of equivalent form reliability has met considerable criticism (eg Buros, 1972, p. 210). The administration of two or more forms is recommended to overcome this objection, however this often proves impractical (as in this study).

Although Cattell's own figures are not impressive (see table below) other researchers have found the equivalent forms to be more reliable even than those reported by Cattell (eg. Hummel-Rossi and Merrifield, 1977 - alternative form reliability coefficients over a 6-month period ranging from .68 to .82 - Ss=120 grade nine students).

TABLE 25A

Equivalence Co-efficients (Cattell & Cattell, 1975, p.10)

Forms	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4	N=
A with B	.54	.48	.52	.50	.17	.54	.48	.57	.42	.30	.41	.50	.41	.40	1115 girls aged 12-17
A with B	.43	.55	.45	.42	.07	.44	.47	.45	.47	.21	.37	.48	.37	.36	1069 boys aged 12-17
A with B	.48	.52	.48	.46	.12	.49	.47	.51	.45	.26	.39	.49	.39	.38	2184 boys&girls aged 12-17

Reliability of factors must be considered questionable for any scale containing only ten items however the search for comprehensiveness at reasonable length has to be weighed also. While independent assessments of reliability may be described as "modest" (Buros, 1972, p. 208) Cattell's figures (unfortunately only for Form A) present a more confident picture. Cattell presents tables of what he calls "dependability coefficients" of short-term retest to support his scales.

TABLE 25B

Dependability Coefficients - (Cattell & Cattell, 1975, p.9)

Form A

Interval	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4	N=
Immediate Retest	.86	.85	.79	.81	.76	.82	.74	.81	.90	.82	.84	.85	.80	.91	302 high school juniors
One-day	.85	.78	.77	.80	.74	.76	.72	.81	.88	.81	.83	.82	.78	.84	" "

Purpose

A recurrent theme to be found throughout educational research is the attempt to unravel the complex determinants of academic attainment. Although the major interest in this study is the effect of an Outward Bound experience on students' self-esteem as a possible remedial influence in academic achievement, the broader field against which any such study is highlighted is that of the individual personalities of the students.

However any attempt to understand the complete causal chain associated with school attainment, and especially any significant change in levels of school attainment must include an assessment of the influence of personality on change.

It was for these reasons, as well as the provision of further information for the case study element of this broader study, that the use of a personality measure was decided upon.

It is beyond the scope of this study to canvass the complexities of personality analysis. However it is clear that despite attempts to develop sophisticated methods for measuring personality results of self-report personality inventories they still have inherent problems with validity. Similarly the need to deal with both subtlety and complexity in such a dynamic area as the affective domain leads to problems of reliability. (See comments on the instrument - H.S.P.Q.)

Matched against these concerns however is a growing mass of evidence pointing to the potential importance of personality in achievement. This approach has come from many directions (eg. Behrens and Vernon, 1978, and Elliot, 1972), however results are still inconclusive and some research has shown that personality characteristics do not show any marked independent effect on performance (Youngman, 1980).

In studying the relationship between personality and achievement it must be concluded that if determinants other than intellectual ones are to be reliably identified, extreme care is needed over the selection, measurement and analysis of pertinent characteristics (Youngman, 1980, p. 51).

In the search for a suitable instrument a number of broad span personality inventories were assessed. More specific tests were not suitable as this section of the study was not testing any particular hypothesis but instead a search for possible background issues, avenues worthy of further investigation and more complete case study data.

Of the broad span inventories the Minnesota Multiphasic Personality Inventory despite its 14 scores, sound reputation (Buros, 1972) and huge body of literature (eg. Welsh and Dahlstrom, 1956) was rejected essentially as it appears more appropriate to over 16 year olds. At 566 items it is unwieldy and unlikely to sustain the attention of the subjects of this study and is little short of being a psychometric monstrosity.

Of the other well-established inventories, the one most commonly used in research on the relation between personality and achievement (apart from the H.S.P.Q.) is the Junior Eysenck Personality Inventory (Eysenck, 1965). This inventory was rejected partly because of its limited range of factors (unsuitable for a broad search) and the problems with terminology in the Australian context (see Hansford and Neidhart, 1977).

Under these circumstances the H.S.P.Q. appeared the most suitable instrument to use for the purposes of this study. Its 14 factors have been analysed and "normalised" for various groups, and nationalities (eg. Butcher, Ainsworth, and Nesbitt, 1972) and the relationship of factors with achievement has been studied broadly (eg. Naylor, 1972).

While the process of factor analysis has advantages, especially in its potential depth and range for determining characteristics, the factor analytic approach used by Cattell has inherent weaknesses, especially in the somewhat arbitrary nominating of actual traits to the highly correlated cluster of items which have been identified.

There is nevertheless considerable evidence (eg. Ahammer and Schaie, 1970) of the construct validity of at least many of the H.S.P.Q. dimensions.

A particular potential advantage of the H.S.P.Q. is the inclusion of a test of cognitive ability (Factor B - Intelligence - Cattell and Cattell, 1975, p. 28). Although this factor yields lower correlations with achievement than would be expected from a full scale intelligence test it is useful in the context of this study for picking up indicators for further study in the cognitive domain.

In a sense Factor B represents the key feature of the H.S.P.Q. in that the particular deficiency of the H.S.P.Q. may be the obverse of its merit, the fact that by being comprehensive and measuring a large number of factors in a comparatively short testing time it necessarily sacrifices some precision.

An additional advantage in using the H.S.P.Q. is its relationship with other studies of the effects and processes of Outward Bound.

Although very few studies of Outward Bound have employed the H.S.P.Q., there are nevertheless some (eg. Naches and Roberts, 1967).

The 16 PF however has been used more extensively (eg. Strutt, 1966; Adams, 1970; Johnson, 1972; Hendy, 1975) and so provides additional possibilities for comparisons of data.

Administration

Although the H.S.P.Q. manual (p. 16) provides good detail for test administration and allows for the meaning of words being explained to the students (except for intelligence scale items), concern about the reading abilities of the O.B.B.C. led to some changes in administration.

The method used on T_1 and T_2 was to create a non-threatening climate for three students at a time with the tester. Each question was then read to them with them reading simultaneously. Any words were explained. Small partitions prevented students seeing other answers and process was controlled to ensure considered answers free of any competitive stresses.

The students answered the questions by circling the chosen answer on the question paper. At a later time each student's answers were transferred to the answer sheet, checked and scored.

This procedure effectively maintained the test as a personality test and not a test of comprehension, reading or transpositional abilities.

T_1 administration was on day one of the course while T_2 was one month after the conclusion of the course and administered at the home school in small groups under similar general conditions as T_1.

Presentation of Results

1) Means of T_1 and T_2 for the group have been converted to stens for visual presentation on a profile format.

   Means are also provided for comparative purposes, of the H.S.P.Q. Norm population (Form A - N=3736; Form B - N=2746; based on males - 14½ years - 1968-9 H.S.P.Q. Tabular Supplement with Norms - Cattell and Cattell 1975).

2) Raw score results are presented for Form A(T_1) and Form B(T_2) with Norm comparisons by factors.

3) An analysis of sten differences T_1-T_2 by factor has been made to attempt to identify which factors had greatest change effects, whether these changes represented movements towards the mean or from the mean towards either pole. The results are calculated and shown as follows: If T_1 score was outside the grey "normal" band and a T_2 score was closer to the norm it was judged as moving towards the norm and so listed beside the norm line on the factor. If the T_1 score had been on the high sten side and so was moving towards a lower sten side in order to move toward the mean it was given a negative sign. These basic principles apply throughout. Hence an indicator of +2 on the pole line (see for example Bennet on factor A) means that his T_1 score was lower than the mean or at the mean and moved from that position toward the pole in a positive direction. John, for example, on factor A moved from a high mean position toward the pole by going in a negative direction.

   If there was no difference between T_1 and T_2 scores, it was marked "0."

   Both the movements toward the norm and the movements towards the poles for each factor were divided into positive and negative direction columns. These totals were then added to give a total difference, "d" for the norm and poles in each factor. For example the movements toward the norm for factor A totalled 5 in a positive direction and 2 in a negative direction which gave 17 movements towards the norm in total.

The next column gave the weighted difference "wd" as positive 13. The 'factor total "d"' column summed up both the totals of the norm movements and pole movements regardless of weighting. For example, for factor A the total norm movements was 17 and the pole movements was 4 and the total of all movements for that factor was 21.

The total weighted difference for factor A (Factor total "wd") was +17 (+13 for the norms and +4 for the poles). Also, the total positive movement and the total negative movement towards the norm and towards the poles were recorded.

4) A "t" test was administered, by factor, between means of the Bridging Course and the means on the H.S.P.Q. Norm population. As one sample is large (eg. 3736 Form A) and one small (i.e. 11 or 12) the formula for small independent samples could not be used. Hence the formula

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

was used to calculate "t."

Although this method has some imperfections the results give indications of factors on which the subjects of this study differ to some degree from the H.S.P.Q. population norms.

This "t" test procedure was used in an attempt to compare the O.B.B.C. students with the population on each occasion, not as any attempt to assess change. However the assumption is made that if there are possible significant differences between the sample and the population on time 1 and no differences on time 2 then some change (generally towards the norm) must have taken place.

A test of educational significance was calculated between the means of T_1 and T_2 and expressed in terms of the average standard deviations of the samples on both times. A rule of thumb was established that a difference in excess of .5 of a standard deviation may be educationally (if not statistically) significant as it is an indicator of considerable change occuring within the sample distribution.

5) The Kolmogorov-Smirnov One Sample Test was applied to test the agreement between the Time 1 distributions of scores on each factor (which was taken as control and assumed to be a theoretical distribution) and the Time 2 distribution of scores on each factor. Levels of significance were calculated on a two tail test: $D = \text{maximum } |Fo(X)-Sn(X)|$

6) The Wilcoxon Matched-Pairs Signed-Ranks Test was used to analyse the pairs of responses (T_1 and T_2) on each factor for each student in order to assess the changed patterns of responses for each factor and find indications of directions of changes.

7) A "t" test (correlated sample) was administered to determine signif. changes T_1-T_2 for each factor.

8) Factor B of the H.S.P.Q. was more closely investigated and comparisons of sten scores T_1-T_2 for each student were made. The sten equivalents on I.Q. points were compared and differences calculated. The stens were related to the scales in the H.S.P.Q. manual (p. 21) for traditional I.Q. scores for the Australian born students and for "culture fair" I.Q. scores for students of ethnic background.

   These results and comparisons are presented only because Factor B presented more consistent change effects than other factors.

   However this information must be interpreted very cautiously as much of the basis of interpreting and equating I.Q. scores on a single sub-scale of a personality test must be considered questionable.

9) Individual student H.S.P.Q. test profiles are presented for visual assessment and comparison on a T_1 T_2 basis. Arrows indicate direction of changes.

Sample size: NOTE: One student (Danny) did not complete H.S.P.Q. T_2 hence N=12 in T_1 applications and N=11 in T_2 applications and T_1-T_2 comparisons.

Outward Bound Bridging Course - 1981

Means of Bridging Course on Time One & Time Two

TABLE 26

FACTOR	T1 $\bar{X}$ HSPQ (A)	T1 $\bar{X}$ OBBC (A)	T2 $\bar{X}$ HSPQ (B)	T2 $\bar{X}$ OBBC (B)	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	10.02	8.5	10.81	11.36	**RESERVED,** DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)		**WARMHEARTED,** OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly, cyclothymia)
B	6.49	5.75	6.60	6.91	**DULL,** CONCRETE-THINKING (Lower intelligence)		**BRIGHT,** ABSTRACT-THINKING (Higher intelligence)
C	9.41	10.00	10.46	10.27	**AFFECTED BY FEELINGS,** EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)		**EMOTIONALLY STABLE,** MATURE, FACES REALITY, CALM (Higher ego strength)
D	10.60	11.33	9.9	9.54	**UNDEMONSTRATIVE,** DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)		**EXCITABLE,** IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	10.27	9.25	10.18	10.82	**OBEDIENT,** MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)		**ASSERTIVE,** AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	10.12	8.92	10.34	9.45	**SOBER,** TACITURN, SERIOUS (Desurgency)		**ENTHUSIASTIC,** HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	10.61	10.33	11.61	11.91	**DISREGARDS RULES,** EXPEDIENT (Weaker superego strength)		**CONSCIENTIOUS,** PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	10.57	8.58	10.21	10.27	**SHY,** TIMID, THREAT-SENSITIVE (Threctia)		**ADVENTUROUS,** "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	7.01	6.58	8.53	7.73	**TOUGH-MINDED,** REJECTS ILLUSIONS (Harria)		**TENDER-MINDED,** SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	9.10	10.17	8.47	8.91	**ZESTFUL,** LIKES GROUP ACTION (Zeppia)		**CIRCUMSPECT INDIVIDUALISM,** REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	8.99	9.00	10.76	10.64	**SELF-ASSURED,** COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)		**APPREHENSIVE,** SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q2	9.70	10.50	8.66	8.0	**SOCIABLY GROUP-DEPENDENT,** A "JOINER" AND SOUND FOLLOWER (Group dependency)		**SELF-SUFFICIENT,** PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q3	10.29	10.58	10.23	9.64	**UNCONTROLLED,** LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)		**CONTROLLED,** EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High strength of self-sentiment)
Q4	10.06	13.58	10.90	12.36	**RELAXED,** TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)		**TENSE,** FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

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TABLE 27

Outward Bound Bridging Course - 1981

High School Personality Questionnaire

Raw Score Results Form A. Time 1

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
Abdullah	7	5	16	8	10	10	9	8	5	10	9	8	10	11
Bennett	10	4	12	17	9	8	18	8	9	5	9	12	14	16
Danny	17	8	9	11	10	13	10	12	6	11	8	8	8	16
Fabian	9	4	6	12	8	9	5	2	4	14	12	10	8	15
Gary	1	7	14	10	11	8	10	6	7	12	10	16	13	12
Jerry	11	3	13	9	12	5	8	9	7	10	10	11	11	11
Joe	14	5	9	11	3	7	12	8	9	10	6	8	14	15
John	11	9	6	12	4	14	14	14	9	11	7	4	11	18
Mario	7	7	8	11	13	5	4	12	5	11	5	12	9	9
Peter	4	4	14	8	12	11	15	9	5	9	8	13	14	11
Shayne	4	7	2	19	11	10	9	8	5	8	14	10	8	16
Stephen	7	6	11	8	8	7	10	7	8	11	10	14	9	13
$\bar{X}$	8.5	5.75	10.00	11.33	9.25	8.92	10.33	8.58	6.58	10.17	9.00	10.50	10.58	13.58
HSPQ $\bar{X}$	10.02	6.49	9.41	10.60	10.27	10.12	10.61	10.57	7.01	9.10	8.99	9.70	10.29	10.07
S	4.29	1.78	3.92	3.32	2.97	2.72	3.81	2.98	1.75	2.11	2.38	3.09	2.60	2.66
HSPQ(S)	3.37	2.05	3.33	3.44	2.92	3.35	3.29	3.38	3.70	3.01	3.31	3.81	3.20	3.46
N = 12														

HSPQ N = 3736

Outward Bound Bridging Course - 1981

High School Personality Questionnaire

Raw Score Results Form B. Time 2

TABLE 28

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
Abdullah	10	7	12	11	10	10	17	8	6	13	12	11	9	13
Bennett	14	5	9	13	10	10	16	8	12	6	7	9	11	12
Danny	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fabian	10	8	6	11	7	16	4	8	8	6	9	10	4	10
Gary	9	9	10	7	12	4	12	14	4	6	12	11	10	6
Jerry	15	6	14	6	11	6	17	16	7	8	5	9	9	8
Joe	12	7	8	13	15	13	8	8	6	11	13	5	7	17
John	9	7	12	13	16	14	12	12	11	6	13	4	10	15
Mario	14	7	14	7	8	8	12	7	8	9	10	8	14	11
Peter	10	5	11	11	6	8	13	5	8	15	13	10	11	17
Shayne	14	8	9	9	15	12	11	12	6	7	11	1	11	16
Stephen	8	7	8	4	9	3	9	15	9	11	12	10	10	11
$\bar{X}$	11.36	6.91	10.27	9.54	10.82	9.45	11.91	10.27	7.73	8.91	10.64	8.0	9.64	12.36
HSPQ $\bar{X}$	10.81	6.60	10.46	9.90	10.18	10.34	11.61	10.21	8.53	8.47	10.76	8.66	10.23	10.90
S	2.38	1.16	2.45	2.99	3.21	3.94	3.78	3.49	2.22	3.03	2.53	3.10	2.42	3.47
HSPQ(S)	3.26	2.20	3.54	3.29	2.84	3.51	3.54	3.30	3.36	2.78	3.29	3.41	3.11	3.23
N = 11														

HSPQ N = 2746

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Outward Bound Bridging Course 1981

TABLE 29

H.S.P.Q.

Analysis of sten differences T1 - T2 (by Factor)

		Abdullah	Bennett	Fabian	Gary	Jerry	Joe	John	Mario	Peter	Shayne	Stephen	"d" +	"d" -	Σd	Σwd	FACTOR ΣD	FACTOR ΣWD
A	Norm	+1		0	+3		-2		+3	+3	+5	0	15	2	17	+13	23	+15
	Poles		+2			+2		-2					4	2	6	+ 2		
B	Norm	+2	+1	+4		+2	+2	0	0	+1		+1	13	0	13	+13	16	+16
	Poles				+2						+1		3	0	3	+ 3		
C	Norm	-3	-2	0	-3	-1		+3		-2			3	11	14	- 8	23	- 5
	Poles						-1		+2		+4	-2	6	3	9	+ 3		
D	Norm	+2	-2	0						+2	-5		4	7	11	- 3	20	- 8
	Poles				-1	-2	+1	+1	-2			-2	2	7	9	- 5		
E	Norm	0	0			-1	+8	+9	-3	-5		+1	18	9	27	+ 9	32	+12
	Poles			-1	+1						+3		4	1	5	+ 3		
F	Norm	0	+1			+1	+3	0	+2	-2	+1		8	2	10	+ 6	19	+ 5
	Poles			+4	-2							-3	4	5	9	- 1		
G	Norm		-2		+1	+4		-2	+5	-2			10	6	16	+ 4	24	+ 2
	Poles	+3		-1			-3				0	-1	3	5	8	- 2		
H	Norm	0	0	+3	+5			0			+3	+5	16	0	16	+16	25	+15
	Poles					+4	0		-2	-3			4	5	9	- 1		
I	Norm			+1		-1	-3						1	4	5	- 3	12	- 6
	Poles	-1	+2		-3			0	0	0	-1	0	2	5	7	- 3		
J	Norm		+1	-5	-3	-1		-3	-1				1	13	14	-12	24	- 4
	Poles	+3					+1			+5	-1	0	9	1	10	+ 8		
O	Norm	+1		-3			+3	+3	+2		-3		9	6	15	+ 3	23	- 1
	Poles		-2		0	-4				+2		0	2	6	8	- 4		
Q2	Norm	+3	-1		-2			+1	-2	-2		-2	4	9	13	- 5	16	- 8
	Poles			0		0	-1				-2		0	3	3	- 3		
Q3	Norm		-2		-2	-1	-5	-1		-2	+2		2	13	15	-11	21	-11
	Poles	0		-3					+3			0	3	3	6	0		
Q4	Norm		-3	-3	-5			-2				-2	0	15	15	-15	22	-12
	Poles	+1				-2	+1		0	+3	0		5	2	7	+ 3		

Σpositive sten movements towards the Norm = 112

Σnegative sten movements towards the Norm = 97

Σpositive sten movements towards the Poles = 51

Σnegative sten movements towards the Poles = 48

TOTALS = 300 +10

TABLE 30

Outward Bound Bridging Course - 1981

H.S.P.Q.

Summary of Results "t" test O.B.B.C. (T1) (Form A) & Population Norms (Form A)

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
$\bar{X}$ O.B.B.C.	8.5	5.75	10.00	11.33	9.25	8.92	10.33	8.58	6.58	10.17	9.00	10.50	10.58	13.58
$\bar{X}$ Population	10.2	6.49	9.41	10.60	10.27	10.12	10.61	10.57	7.01	9.10	8.99	9.70	10.29	10.07
S O.B.B.C.	4.29	1.78	3.92	3.32	2.97	2.72	3.81	2.98	1.75	2.11	2.38	3.09	2.60	2.66
S Population	3.37	2.05	3.33	3.44	2.92	3.35	3.29	3.38	3.70	3.01	3.31	3.81	3.20	3.46
t =	1.226	1.437	0.52	0.79	1.188	1.524	0.254	2.309	0.845	1.751	0.014	0.895	0.385	4.560
d.f. = 11														
p =	> .20	> .10	> .20	> .20	> .20	> .10	> .20	< .10 > .05	> .20	< .20 > .10	> .20	> .20	> .20	< .001
where														
p = < .20 (=3)		*				*				*				
p = < .10 (=1)								*						
p = < .05 (=1)														*

Summary of Results "t" test O.B.B.C. (T2) (Form B) & Population Norms (Form B)

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
$\bar{X}$ O.B.B.C.	11.36	6.91	10.27	9.54	10.82	9.45	11.91	10.27	7.73	8.91	10.64	8.0	9.64	12.36
$\bar{X}$ Population	10.81	6.60	10.46	9.9	10.18	10.34	11.61	10.21	8.53	8.47	10.76	8.66	10.23	10.90
S O.B.B.C.	2.38	1.16	2.45	2.99	3.21	3.94	3.78	3.49	2.22	3.03	2.53	3.10	2.42	3.47
S Population	3.26	2.20	3.54	3.29	2.84	3.51	3.54	3.30	3.36	2.78	3.29	3.41	3.11	3.23
t =	.764	.880	.256	.398	.66	.748	.263	.057	1.189	.481	.157	.704	.806	1.393
d.f. = 10														< .20
p =	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .20	> .10
where														
p = < .20 (=1)														*
p = < .10 (=0)														
p = < .05 (=0)														

Est. of educ. (not statist) signif. Expressed in terms of S)	.86 **	.79 **	.08 N.S.	.57 **	.51 **	.16 N.S.	.42 N.S.	.52 **	.58 **	.49 N.S.	.67 **	.66 **	.37 N.S.	.40 N.S.

** Educational significance estimated by dividing difference of $\bar{X}1-\bar{X}2$ by $\bar{X}$ of S1 + S2. This gives a general (not statistical) guide to the extent of change effect likely at T2 from T1. Where T1-T2 is $\frac{1}{2}$ $\bar{X}$S1S2 (i.e. .5-**) there may be educationally significant change effects

Outward Bound Bridging Course - 1981

H.S.P.Q.

A) Summary of Results of Kolmogorov - Smirnov One Sample Test

TABLE 31A

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
(N = 11)														
D =	.272	.364	.364	.182	.272	.182	.273	.364	.272	.272	.182	.364	.272	.364
p =	>.20	>.05 <.10	>.05 <.10	>.20	>.20	>.20	>.20	>.05 <.10	>.20	>.20	>.20	>.05 <.10	>.20	>.05 <.10
at .05 level of Sig.		N.S.	N.S.					N.S.				N.S.		N.S.
at .10 level of Sig.	N.S.	S*	S*	N.S.	N.S.	N.S.	N.S.	S*	N.S.	N.S.	N.S.	S*	N.S.	S*

B) Summary of Results of Wilcoxon Matched - Pairs Signed - Ranks Test

TABLE 31B

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
N = 11														
T =	7	0	22.5	17	17.5	17.5	26.5	4	6.5	18.5	20	11	12	10
(Effective N =)	9	9	10	10	9	9	10	7	7	10	9	9	9	9
p =	>.05	<.01	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05
at .05 level of Sig.	N.S.	*S	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

C) Summary of Results of "t" test (for correlated data)

TABLE 31C

FACTOR	A	B	C	D	E	F	G	H	I	J	O	Q2	Q3	Q4
N = 11														
d.f. = 10														
t = 134	3.069	2.887	0.141	1.538	.930	.714	1.091	1.383	1.544	.952	1.025	4.966	1.437	.899
p =	<.02	<.02	>.80	>.10	>.30	>.40	>.20	>.10	>.10	>.30	>.30	<.001	>.10	>.3135
direction of movement of $\bar{X}_2$ of signif. factors	+	+	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	-	N.S.	N.S.

Outward Bound Bridging Course - 1981

H.S.P.Q. Factor B Results (Fluid Intelligence)

(Expressed in I.Q. Scores)

TABLE 32

	T1		T2		T1 - T2
	Sten	IQ	Sten	IQ	IQ
Abdullah	4	82	5	106	+24
Bennett	3	70	4	82	+12
Fabian	3	70	7	118	+48
Gary*	6	104	8	120	+16
Jerry	3	70	5	94	+24
Joe	4	82	6	106	+24
Mario	6	106	6	106	-
Peter*	3	80	4	88	+8
Shayne*	6	104	7	112	+8
Stephen	5	92	6	106	+14
	$\bar{X}$ =	86	$\bar{X}$ =	103.8	$\bar{X}wd$ = 17.8
	S =	13.86	S =	11.71	S(d)= 12.6

"t" = 5.5 (d.f.=9) p= < .001

Note: Danny absent at T2. John adopted a different approach to completing some questions which made his score on this factor unreliable and not included.

* Traditional IQ score applied - all other matched with culture fair IQ scores.

IPAT

Jr.-Sr. H S P Q TEST PROFILE A~~-~~B (A or B)

Edition Used: ~~1963~~ 1968-69 ✓PRI

Name: ABDULLAH Age: 15 Y 10M Sex: M Grade in School: YR 10 Date: T1 ~~-~~ T2 1981

P. 106

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	HIGH SCORE DESCRIPTION
A	7	10			**RESERVED,** DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	**WARMHEARTED,** OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	5	7			**DULL,** CONCRETE-THINKING (Lower intelligence)	**BRIGHT,** ABSTRACT-THINKING (Higher intelligence)
C	16	12			**AFFECTED BY FEELINGS,** EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	**EMOTIONALLY STABLE,** MATURE, FACES REALITY, CALM (Higher ego strength)
D	8	11			**UNDEMONSTRATIVE,** DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	**EXCITABLE,** IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	10	10			**OBEDIENT,** MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	**ASSERTIVE,** AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	10	10			**SOBER,** TACITURN, SERIOUS (Desurgency)	**ENTHUSIASTIC,** HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	9	17			**DISREGARDS RULES,** EXPEDIENT (Weaker superego strength)	**CONSCIENTIOUS,** PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	8	8			**SHY,** TIMID, THREAT-SENSITIVE (Threctia)	**ADVENTUROUS,** "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	5	6			**TOUGH-MINDED,** REJECTS ILLUSIONS (Harria)	**TENDER-MINDED,** SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	10	13			**ZESTFUL,** LIKES GROUP ACTION (Zeppia)	**CIRCUMSPECT INDIVIDUALISM,** REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	9	12			**SELF-ASSURED,** COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	**APPREHENSIVE,** SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	8	11			**SOCIABLY GROUP-DEPENDENT,** A "JOINER" AND SOUND FOLLOWER (Group dependency)	**SELF-SUFFICIENT,** PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	10	9			**UNCONTROLLED,** LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	**CONTROLLED,** EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High strength of self-sentiment)
Q_4	11	13			**RELAXED,** TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	**TENSE,** FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

STANDARD TEN SCORE (STEN) → Average ←

1 2 3 4 5 6 7 8 9 10

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

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Jr.-Sr. H S P Q TEST PROFILE A & B (A or B) Edition Used: ~~1963~~ 1968-69 PR2

Name: BENNETT Age: 15 y 2m Sex: M Grade in School: YR 10 Date: T1 & T2 1921

P. 107

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) (→ Average ←) 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	10	14			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)		WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	4	5			DULL, CONCRETE-THINKING (Lower intelligence)		BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	12	9			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)		EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	17	13			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)		EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	9	10			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)		ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	8	10			SOBER, TACITURN, SERIOUS (Desurgency)		ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	18	16			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)		CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	8	8			SHY, TIMID, THREAT-SENSITIVE (Threctia)		ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	9	12			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)		TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	5	6			ZESTFUL, LIKES GROUP ACTION (Zeppia)		CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	9	7			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Low guilt proneness)		APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	12	9			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)		SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	14	11			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)		CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	16	12			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)		TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A or B (A or B) Edition Used: ~~1968~~ 1968-69 PR3

Name: DANNY Age: 14Y 5M Sex: M Grade in School: YR 9 Date: T1 T2 1981

P. 108

FACTOR	RAW SCORE Form A	Form B	Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	17				RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	5	WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia)
B	8				DULL, CONCRETE-THINKING (Lower intelligence)	7	BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	9				AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	5	EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	11				UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	6	EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	10				OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	5	ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	13				SOBER, TACITURN, SERIOUS (Desurgency)	7	ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	10				DISREGARDS RULES, EXPEDIENT (Weaker superego strength)	5	CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	12				SHY, TIMID, THREAT-SENSITIVE (Threctia)	6	ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	6				TOUGH-MINDED, REJECTS ILLUSIONS (Harria)	5	TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	11				ZESTFUL, LIKES GROUP ACTION (Zeppia)	7	CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	8				SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	5	APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	8				SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)	4	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	8				UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	4	CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High self-sentiment integration)
Q_4	16				RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	9	TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

14 =

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A • B (A or B)

Edition Used: ~~••••~~ 1968-69 ✓PR4

Name: FABIAN Age: 15Y 2M Sex: M Grade in School: YR 10 Date: T1 • T2 1981

P. 109

FACTOR	RAW SCORE Form A	Form B	Total	Sten Score	LOW SCORE DESCRIPTION	HIGH SCORE DESCRIPTION
A	9	10			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, Cyclothyme)
B	4	8			DULL, CONCRETE-THINKING (Lower intelligence)	BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	6	6			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	12	11			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STOODY (Phlegmatic temperament)	EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	3	7			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	9	16			SOBER, TACITURN, SERIOUS (Desurgency)	ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	5	4			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)	CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	2	3			SHY, TIMID, THREAT-SENSITIVE (Thectia)	ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	4	8			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)	TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	14	6			ZESTFUL, LIKES GROUP ACTION (Zeppia)	CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	12	9			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	10	10			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	8	4			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High self-sentiment integration)
Q_4	15	10			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	TENSE, FRUSTRATED, DRIVEN, OVERAROUSED, FRETFUL (High ergic tension)

STANDARD TEN SCORE (STEN) → Average ←

1 2 3 4 5 6 7 8 9 10

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A & B (A or B) Edition Used: ~~1963~~ 1968-69 PR5

Name: GARY Age: 14Y 3M Sex: M Grade in School: YR 9 Date: T1 - T2 1961

P. 110

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	1	0			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)		WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia)
B	7	9			DULL, CONCRETE-THINKING (Lower intelligence)		BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	14	10			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)		EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	10	7			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)		EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitation)
E	11	12			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)		ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	8	4			SOBER, TACITURN, SERIOUS (Desurgency)		ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	10	12			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)		CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Superego strength)
H	6	14			SHY, TIMID, THREAT-SENSITIVE (Threctia)		ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	7	4			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)		TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	12	6			ZESTFUL, LIKES GROUP ACTION (Zeppia)		CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	10	12			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)		APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	16	11			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)		SELF-SUFFICIENT, RESOURCEFUL, DECISIVE, RESOURCEFUL (Self-sufficiency)
Q_3	13	10			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)		CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	12	6			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)		TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A~~+B~~ (A or B)

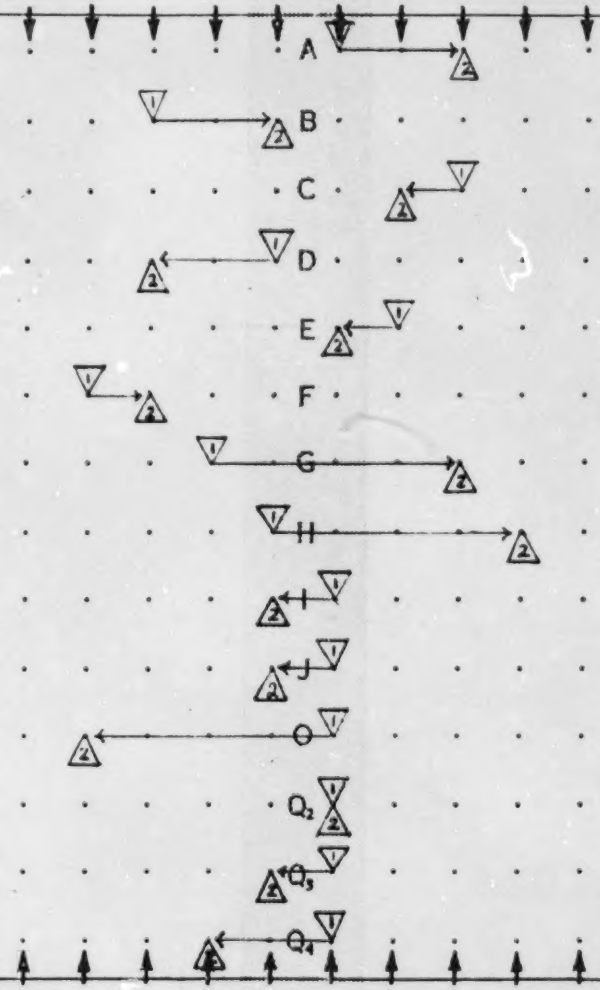
Edition Used: ~~1968~~ 1968-69 ✓PR6

Name: JERRY Age: 14Y 8M Sex: M Grade in School: YR 9 Date: T1 T2 1981

P. 111

FACTOR	RAW SCORE Form A/E	RAW SCORE Form B/F	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	HIGH SCORE DESCRIPTION
A	11	15			**RESERVED,** DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	**WARMHEARTED,** OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	3	6			**DULL,** CONCRETE-THINKING (Lower intelligence)	**BRIGHT,** ABSTRACT-THINKING (Higher intelligence)
C	13	14			**AFFECTED BY FEELINGS,** EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	**EMOTIONALLY STABLE,** MATURE, FACES REALITY, CALM (Higher ego strength)
D	9	6			**UNDEMONSTRATIVE,** DELIBERATE, INACTIVE, STOODY (Phlegmatic temperament)	**EXCITABLE,** IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	12	11			**OBEDIENT,** MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	**ASSERTIVE,** AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	5	6			**SOBER,** TACITURN, SERIOUS (Desurgency)	**ENTHUSIASTIC,** HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	8	17			**DISREGARDS RULES,** EXPEDIENT (Weaker superego strength)	**CONSCIENTIOUS,** PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	9	16			**SHY,** TIMID, THREAT-SENSITIVE (Threctia)	**ADVENTUROUS,** "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	7	7			**TOUGH-MINDED,** REJECTS ILLUSIONS (Harria)	**TENDER-MINDED,** SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	10	8			**ZESTFUL,** LIKES GROUP ACTION (Zeppia)	**CIRCUMSPECT INDIVIDUALISM,** REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	10	5			**SELF-ASSURED,** COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	**APPREHENSIVE,** SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	11	9			**SOCIABLY GROUP-DEPENDENT,** A "JOINER" AND SOUND FOLLOWER (Group dependency)	**SELF-SUFFICIENT,** PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	11	9			**UNCONTROLLED,** LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	**CONTROLLED,** EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High strength of self-sentiment)
Q_4	11	8			**RELAXED,** TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	**TENSE,** FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

STANDARD TEN SCORE (STEN) → Average ←



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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

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Jr.-Sr. H S P Q TEST PROFILE A & B (A or B)

Edition Used: ~~1968~~ 1968-69 ✓PR7

Name: JOE Age: 16Y 1M Sex: M Grade in School: YR 10 Date: T1 T2 1981

P.112

FACTOR	RAW SCORE Form A	Form B	Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	14	12			**RESERVED**, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	A 1 2	**WARMHEARTED**, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	5	7			**DULL**, CONCRETE-THINKING (Lower intelligence)	B 1 2	**BRIGHT**, ABSTRACT-THINKING (Higher intelligence)
C	9	8			**AFFECTED BY FEELINGS**, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	C 1 2	**EMOTIONALLY STABLE**, MATURE, FACES REALITY, CALM (Higher ego strength)
D	11	13			**UNDEMONSTRATIVE**, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	D 1 2	**EXCITABLE**, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	3	15			**OBEDIENT**, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	E 1 2	**ASSERTIVE**, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	7	13			**SOBER**, TACITURN, SERIOUS (Desurgency)	F 1 2	**ENTHUSIASTIC**, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	12	8			**DISREGARDS RULES**, EXPEDIENT (Weaker superego strength)	G 1 2	**CONSCIENTIOUS**, PERSISTENT, MORALISTIC, STAID (Superego strength)
H	8	8			**SHY**, TIMID, THREAT-SENSITIVE (Threctia)	H 1 2	**ADVENTUROUS**, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	9	6			**TOUGH-MINDED**, REJECTS ILLUSIONS (Harria)	I 1 2	**TENDER-MINDED**, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	10	11			**ZESTFUL**, LIKES GROUP ACTION (Zeppia)	J 1 2	**CIRCUMSPECT INDIVIDUALISM**, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	6	13			**SELF-ASSURED**, COMPLACENT, SECURE, PLACID, SERENE (Unpremsed confidence)	O 1 2	**APPREHENSIVE**, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	8	5			**SOCIABLY GROUP-DEPENDENT**, A "JOINER" AND SOUND FOLLOWER (Group dependency)	Q_2 1 2	**SELF-SUFFICIENT**, RESOURCEFUL, DECISIVE, PREFERS OWN DECISIONS (Self-sufficiency)
Q_3	14	7			**UNCONTROLLED**, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	Q_3 1 2	**CONTROLLED**, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	15	17			**RELAXED**, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	Q_4 1 2	**TENSE**, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

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Jr.-Sr. H S P Q TEST PROFILE A~~·~~ B (A or B)

Edition Used: ~~1960~~ 1968-69 ✓ PR8

Name: JOHN Age: 15y 1m Sex: M Grade in School: YR 10 Date: T1 · T2 1981

P. 113

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	11	9			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	A	WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	9	9			DULL, CONCRETE-THINKING (Lower intelligence)	B	BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	6	12			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	C	EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	12	13			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	D	EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	4	16			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	E	ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	14	14			SOBER, TACITURN, SERIOUS (Desurgency)	F	ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	14	12			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)	G	CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	14	12			SHY, TIMID, THREAT-SENSITIVE (Threctia)	H	ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	9	11			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)	I	TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	11	6			ZESTFUL, LIKES GROUP ACTION (Zeppia)	J	CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	7	13			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	O	APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	4	4			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)	Q_2	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	11	10			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	Q_3	CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	18	15			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	Q_4	TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A-B (A or B)

Edition Used: [redacted] 1968-69 PR9

Name: MARIO Age: 14Y 6M Sex: M Grade in School: YR 10 Date: T1-T2 1981

P. 114

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	7	14			**RESERVED,** DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	A1 → 2	**WARMHEARTED,** OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly cyclothymia)
B	7	7			**DULL,** CONCRETE-THINKING (Lower intelligence)	B 1/2	**BRIGHT,** ABSTRACT-THINKING (Higher intelligence)
C	8	14			**AFFECTED BY FEELINGS,** EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	1 C → 2	**EMOTIONALLY STABLE,** MATURE, FACES REALITY, CALM (Higher ego strength)
D	11	7			**UNDEMONSTRATIVE,** DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	2 ← D 1	**EXCITABLE,** IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	13	8			**OBEDIENT,** MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	2 ← E 1	**ASSERTIVE,** AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	5	8			**SOBER,** TACITURN, SERIOUS (Desurgency)	1 → 2 F	**ENTHUSIASTIC,** HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	4	12			**DISREGARDS RULES,** EXPEDIENT (Weaker superego strength)	1 → G 2	**CONSCIENTIOUS,** PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	12	7			**SHY,** TIMID, THREAT-SENSITIVE (Threctia)	2 ← H 1	**ADVENTUROUS,** "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	5	8			**TOUGH-MINDED,** REJECTS ILLUSIONS (Harria)	1 I 2	**TENDER-MINDED,** SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	11	3			**ZESTFUL,** LIKES GROUP ACTION (Zeppia)	J 2 ← 1	**CIRCUMSPECT INDIVIDUALISM,** REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	5	10			**SELF-ASSURED,** COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	1 → 2 O	**APPREHENSIVE,** SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	12	8			**SOCIABLY GROUP-DEPENDENT,** A "JOINER" AND SOUND FOLLOWER (Group dependency)	2 ← Q_2 1	**SELF-SUFFICIENT,** PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	9	14			**UNCONTROLLED,** LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	1 Q_3 → 2	**CONTROLLED,** EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	9	11			**RELAXED,** TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	1 Q_4 2	**TENSE,** FRUSTRATED, DRIVEN, OVERAROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A & B (A or B)

Edition Used: [redacted] 1968-69 ✓PR10

Name: PETER Age: 16Y 2M Sex: M Grade in School: YR 10 Date: T_1 - T_2 1981

FACTOR	RAW SCORE Form A	RAW SCORE Form B	RAW SCORE Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	4	10			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	A	WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	4	5			DULL, CONCRETE-THINKING (Lower intelligence)	B	BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	14	11			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	C	EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	8	11			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	D	EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	12	6			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	E	ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	11	8			SOBER, TACITURN, SERIOUS (Desurgency)	F	ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	15	13			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)	G	CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	9	5			SHY, TIMID, THREAT-SENSITIVE (Threctia)	H	ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	5	8			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)	I	TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	9	15			ZESTFUL, LIKES GROUP ACTION (Zeppia)	J	CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	8	13			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Unpremsed adequacy)	O	APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	13	10			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)	Q_2	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	14	11			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	Q_3	CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE, (High strength of self-sentiment)
Q_4	11	17			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	Q_4	TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

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Jr.-Sr. H S P Q TEST PROFILE A & B (A or B) Edition Used: ~~1963~~ 1968-69 ✓PR11

Name: SHAYNE Age: 15Y 5M Sex: M Grade in School: YR 10 Date: T_1 - T_2 1981.

P. 116

FACTOR	RAW SCORE Form A	Form B	Total	Sten Score	LOW SCORE DESCRIPTION	STANDARD TEN SCORE (STEN) → Average ← 1 2 3 4 5 6 7 8 9 10	HIGH SCORE DESCRIPTION
A	4	14			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)		WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly Cyclothymia)
B	7	8			DULL, CONCRETE-THINKING (Lower intelligence)		BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	2	9			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)		EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	19	9			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)		EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	11	15			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)		ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	10	12			SOBER, TACITURN, SERIOUS (Desurgency)		ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	9	11			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)		CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	8	12			SHY, TIMID, THREAT-SENSITIVE (Threctia)		ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	5	6			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)		TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	8	7			ZESTFUL, LIKES GROUP ACTION (Zeppia)		CIRCUMSPECT INDIVIDUALISM, RE-FLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	14	11			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)		APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	10	1			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)		SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	8	11			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)		CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High strength of self-sentiment)
Q_4	16	16			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)		TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

IPAT

Jr.-Sr. H S P Q TEST PROFILE A ~~B~~ (A or B)

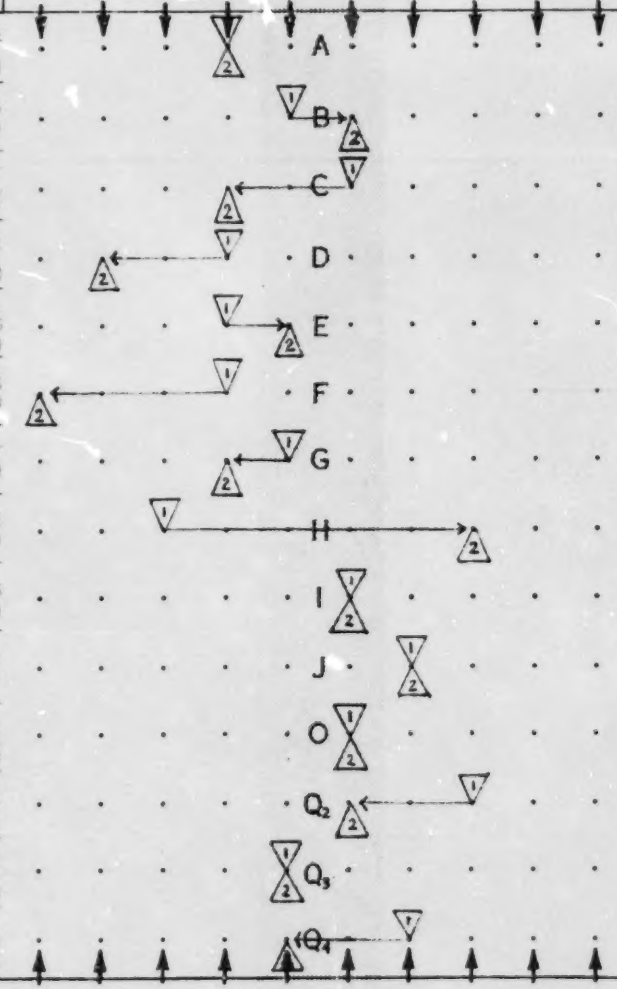
Edition Used: ~~1960~~ 1968-69 ✓ PR12

Name: STEPHEN Age: 16Y 3M Sex: M Grade in School: YR 10 Date: T~~.~~T. 1981

P. 117

FACTOR	RAW SCORE Form A/C	Form B/D	Total	Sten Score	LOW SCORE DESCRIPTION	HIGH SCORE DESCRIPTION
A	7	8			RESERVED, DETACHED, CRITICAL, ALOOF, STIFF (Sizothymia)	WARMHEARTED, OUTGOING, EASY-GOING, PARTICIPATING (Affectothymia, formerly cyclothermia)
B	6	7			DULL, CONCRETE-THINKING (Lower intelligence)	BRIGHT, ABSTRACT-THINKING (Higher intelligence)
C	11	8			AFFECTED BY FEELINGS, EMOTIONALLY LESS STABLE, EASILY UPSET, CHANGEABLE (Lower ego strength)	EMOTIONALLY STABLE, MATURE, FACES REALITY, CALM (Higher ego strength)
D	8	4			UNDEMONSTRATIVE, DELIBERATE, INACTIVE, STODGY (Phlegmatic temperament)	EXCITABLE, IMPATIENT, DEMANDING, OVERACTIVE, UNRESTRAINED (Excitability)
E	8	9			OBEDIENT, MILD, EASILY LED, DOCILE, ACCOMMODATING (Submissiveness)	ASSERTIVE, AGGRESSIVE, COMPETITIVE, STUBBORN (Dominance)
F	7	3			SOBER, TACITURN, SERIOUS (Desurgency)	ENTHUSIASTIC, HEEDLESS, HAPPY-GO-LUCKY (Surgency)
G	10	9			DISREGARDS RULES, EXPEDIENT (Weaker superego strength)	CONSCIENTIOUS, PERSISTENT, MORALISTIC, STAID (Stronger superego strength)
H	7	15			SHY, TIMID, THREAT-SENSITIVE (Threctia)	ADVENTUROUS, "THICK-SKINNED," SOCIALLY BOLD (Parmia)
I	8	9			TOUGH-MINDED, REJECTS ILLUSIONS (Harria)	TENDER-MINDED, SENSITIVE, CLINGING, OVER-PROTECTED (Premsia)
J	11	11			ZESTFUL, LIKES GROUP ACTION (Zeppia)	CIRCUMSPECT INDIVIDUALISM, REFLECTIVE, INTERNALLY RESTRAINED (Coasthenia)
O	10	12			SELF-ASSURED, COMPLACENT, SECURE, PLACID, SERENE (Untroubled adequacy)	APPREHENSIVE, SELF-REPROACHING, INSECURE, WORRYING, TROUBLED (Guilt proneness)
Q_2	14	10			SOCIABLY GROUP-DEPENDENT, A "JOINER" AND SOUND FOLLOWER (Group dependency)	SELF-SUFFICIENT, PREFERS OWN DECISIONS, RESOURCEFUL (Self-sufficiency)
Q_3	9	10			UNCONTROLLED, LAX, FOLLOWS OWN URGES, CARELESS OF SOCIAL RULES (Low self-sentiment integration)	CONTROLLED, EXACTING WILL POWER, SOCIALLY PRECISE, COMPULSIVE (High strength of self-sentiment)
Q_4	13	11			RELAXED, TRANQUIL, TORPID, UNFRUSTRATED, COMPOSED (Low ergic tension)	TENSE, FRUSTRATED, DRIVEN, OVERWROUGHT, FRETFUL (High ergic tension)

STANDARD TEN SCORE (STEN) → Average ←



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SECOND-ORDER AND DERIVED SCORES

Second Stratum	Exvia		Anxiety	
	Cortertia		Independence	
Derived	Neuroticism		Achievement	
	Leadership		Creativity	

A sten of	1	2	3	4	5	6	7	8	9	10	is obtained
by about	2.3%	4.4%	9.2%	15.0%	19.1%	19.1%	15.0%	9.2%	4.4%	2.3%	of teenagers

Comments:

APPENDIX VIII

Programme Information

a) Programme Outline

b) Daily Timetable

c) Revised Daily Timetable

d) Materials

BRIDGING COURSE 1981 - PROGRAMME OUTLINE

WEEK 1

Day 1 Sat.	Day 2 Sun.	Day 3 Mon.	Day 4 Tues.	Day 5 Wed.	Day 6 Thurs.	Day 7 Fri.
-Arrived - introductions, briefings. -set up living area with beds & bookshelves etc. -tour of school. -issued gear -worked out roster system and daily programme. -Reading of story.	-Morning duties -Morning meeting -AM 1st & 2nd session - administered Cooper Smith Self-Esteem Inventory & HSPQ in groups of 4 -PM 3rd session - administered Cooper Smith SEI & HSPQ. -games (outdoor) -diary writing -spelling & maths game -story reading	-Morning duties -Morning meeting -Individual remediation programme & goal setting commenced. -Spelling & maths game -PM Walk to historic site & local bridge -read out items from local newspaper -bingo word game. -story reading.	-Morning duties -Morning meeting -prepared for expedition to woolshed -PM camped at shed -played the spelling game -played games outdoors. -wrote diaries. -read poems and sang.	-AM returned to school and cleaned up -PM Spelling activity introduced & crosswords worked out. -Worked on individual programmes. -read news items -wrote up diaries and started magazine articles. -Story reading.	-Morning duties. -Morning meeting -Worked on individual maths programmes. -PM Individual remediation review and goal setting for english and maths. -read news items. -Story reading.	-Morning duties. -Morning meeting -Spelling activity -maths activity -Continued individual maths work. -read news items -wrote magazine articles. -learnt and sang a number of songs. -story reading.

WEEK 2

Day 8 Sat.	Day 9 Sun.	Day 10 Mon.	Day 11 Tues.	Day 12 Wed.	Day 13 Thurs.	Day 14 Fri.
-Morning duties -1st session - individ. english work. -Initiative task -community service -PM 2nd session - individ. maths work. -sang along with a guitar -wrote magazine articles -story reading	-Morning duties -1st session - english. -2nd session - maths -PM tour of Canberra to War Memorial, Parliament House, Black Mountain Tower etc.	-Morning duties -Morning meeting -1st & 2nd sessions Worked on individ. programmes in english & maths & set out goals. -PM outdoor activities english word game -news items read out -wrote magazine articles -story reading	-Morning duties -Morning meeting -1st session Maths activity -2nd session - english activity -PM 3rd session Worked on individ. maths & english programmes -prepared for next day's trip. -wrote diaries. -song time -story reading	-Morning duties -filled in census forms. -prepared for day's rafting down river -rafted till PM. -transported back to O.B. school -cleaned up. -afternoon session worked on english & maths programmes -read out news item items. -stencilled magazine articles. -story reading	-Morning duties -Morning meeting. -1st & 2nd session Individ. remediation programmes reviewed & goal setting established. -PM 3rd session english & maths work -outdoor activities -collated magazine articles. -story reading (one book completed)	-Morning duties -prepared for departure -1st session - worked on english & maths programmes -left by train for weekend home.

BRIDGING COURSE 1981 - PROGRAMME OUTLINE

WEEK 3

Day 15 Sat.	Day 16 Sun.	Day 17 Mon.	Day 18 Tues.	Day 19 Wed.	Day 20 Thurs.	Day 21 Fri.
Weekend at	home	-Morning duties -Morning meeting -1st session - individual maths work & goal setting -2nd session - Individual english work & goal setting -PM. 3rd session - english & maths individual programmes -group initiative games. -story reading	-Morning duties -Morning meeting -1st & 2nd sessions english & maths programmes. -PM. 3rd session english & maths programmes. -learning activities. -expedition preparation -wrote out route plans & menus onto stencils -story reading	-Morning duties. -Morning meeting -1st & 2nd sessions Individual remediation programmes reviewed and new goals set. -PM. expedition to Booroomba	Expedition at Booroomba Rocks. Rock-climbing and abseiling	Expedition from Booroomba via Bushfold flats to school. PM. returned. cleaned up gear etc. -Wrote stories -Story reading.

WEEK 4

Day 22 Sat.	Day 23 Sun.	Day 24 Mon.	Day 25 Tues.	Day 26 Wed.	Day 27 Thurs.	Day 28 Fri.
-Morning duties -Morning meeting -1st & 2nd & 3rd sessions Individual english & maths work. -PM. 4th session Individual english & maths work. -outdoor activities -trip to town - movie & dinner -wrote diaries -story reading	-Morning duties -Morning meeting -1st & 2nd & 3rd sessions english & maths work. -outdoor activities. -4th session english & maths work. -group initiative games -story reading	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions english & maths work. -PM. 4th session - designed word game and played it. -outdoor activities -worked on magazine -story reading	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions Individual remediation programmes review- & new goal setting -PM. ropes confidence course I -worked on magazine -story reading	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions - english & maths work. -4th session - english & maths work. -magazine preparation -story reading	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions - Individual remediation programmes reviewed & goal setting. -teacher from boys' school for lunch. -PM. continued english & maths programmes. -read plays & asked questions. -played word bingo -story reading.	-Morning duties -Morning meeting -Cleaned up gear etc. 1st & 2nd sessions english & maths work -left by train for home.

BRIDGING COURSE 1981 - PROGRAMME OUTLINE

WEEK 5

Day 29 Sat.	Day 30 Sun.	Day 31 Mon.	Day 32 Tues.	Day 33 Wed.	Day 34 Thurs.	Day 35 Fri.
Weekend at	home	-Morning duties. -Morning meeting -1st, 2nd & 3rd sessions Individual remediation programmes reviewed & goal setting -PM. 4th session continued individ. english & maths work. -read news items -reading plays & aural understanding -story reading.	-Morning duties -1st, 2nd & 3rd sessions - english & maths work -PM. 4th session english & maths work. -story reading.	-Early departure for expedition in Snowy mountains. -arrived Sawpit Creek -hired skis -made camp -practised on skis and toboggans.	-Cross country skiing trip for day -tobogganed later in afternoon. -late PM broke camp & returned to school.	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions - Individual remediation programmes reviewed and goal setting established. -PM. friendly football game with Canberra high school. -4th session english & maths. -story reading.

WEEK 6

Day 36 Sat.	Day 37 Sun.	Day 38 Mon.	Day 39 Tues.	Day 40 Wed.	Day 41 Thurs.	Day 42 Fri.
-Morning duties -1st, 2nd & 3rd sessions - english & maths programmes. -PM. 4th session english & maths work. -outdoor activities -trip to town for dinner & movie	-Morning duties -1st, 2nd & 3rd sessions - individual english & maths programmes. -PM. english & maths work. -swim -outdoor games -magazine preparation. -story reading.	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions Individual remediation programmes reviewed & goal setting -PM. 4th session english & maths work. -outdoor activities -story reading	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions - english & maths work. -PM. 4th session english & maths work. -group session - each person wrote on the three good points for each person in the group - positive feedback from group members. -story reading.	-Morning duties -Morning meeting -1st, 2nd & 3rd sessions - Individual remediation programmes reviewed & goal setting. -PM. 4th session english & maths work. -group initiative tasks. -discussion on future prospects etc. -story reading.	-Morning duties -Left for Queanbeyan High School -AM. Completed State wide exams. -skating -dinner in town. -worked on magazine -story reading	-Morning duties -divided into small groups finalised post-course testing programme using Gapadol reading comprehension, Moreton maths test & Cooper Smith Self-Esteem Inventory. -Finalised magazine -Cleaned-up.

WEEK 7 Day 43 Sat. PARENTS' DAY

-Cleaned up living area.
-Completed Evaluation Questionnaire in small groups.
-barbecue for parents.
-flying fox activity.

BRIDGING COURSE

IN-SCHOOL

DAILY TIMETABLE

7am	Rise and clean
7.30 am	Duty A - to kitchen Duty B - to gardens Duty C - to cleaning
8.15 am	Breakfast
8.45 am	Clean up and prepare
9.00 am	Morning meeting & day plan
9.30 am	1st learning session
10.30 am	Morning Tea - Duty A prepare. Duty B - collect papers & mail
11.15 am	2nd learning session
12.15 am	Duty A - prepare lunch
1.00 pm	Lunch
1.30 pm	Duty A - clean up
2.00 pm	Main activity session
4.00 pm	Free-time
5.00 pm	Duty A prepares dinner
5.45 pm	Dinner
6.30 pm	after dinner - everyone cleans kitchen, dining & living room
7.00 pm	3rd learning session
8.00 pm	News time - radio and newspapers
8.30 pm	Reading session - story read by staff
10.00 pm	Lights out

BRIDGING PROGRAMME - Daily Timetable (cont.)

Notes on duties:

Duty A - Prepares, serves and cleans up after all meals (except dinner when everyone helps with the cleaning up of all areas)

Duty B - at 7.30 am - tends to planting, weeding or harvesting the garden and any special jobs

- at 10.30 am collects the paper & mail from Tharwa village

Duty C - at 7.30 am - clean showers, toilets, attend to rubbish and any special jobs.

BRIDGING PROGRAMME - Daily Timetable

as revised by students

during Week 3

6.45 am	rise and clean
7.15 am	Duties (as per separate roster)
7.45 am	Breakfast
8.15 am	Duty A cleans up
8.30 am	Morning meeting and discuss day's plan
9.00 am	1st learning session
10.00 am	2nd learning session
11.00 am	Morning tea
11.15 am	3rd learning session
12.15 pm	Duty A prepares lunch - Duty B or Duty C to P.O. for mail and papers
1.00 pm	lunch
1.30 pm	Duty A cleans up
2.00 pm	4th learning session
3.00 pm	Activity session (spelling & maths games etc.)
4.00 pm	free-time
5.00 pm	Duty A prepares dinner
5.45 pm	Dinner
6.30 pm	Duty A cleans up
7.00 pm	newspaper reading - news time
7.30 pm	Writing and reading time
9.00 pm	Story reading daily by staff
10.00 pm	Lights out

BRIDGING PROGRAMME - Revised daily timetable (cont.)

Notes on duties

Duty A - Prepares, serves, and cleans up the kitchen after every meal

Duty B - 7.15 am - cleans showers, toilets, attends to rubbish and any special jobs

- after each meal - cleans up the tables in the dining room

- cleans up living area

Duty C - 7.15 am - tends to planting, weeding or harvesting the garden and any special jobs

- after each meal - sweeps & mops kitchen and dining room areas

- cleans up the living area.

Outward Bound Bridging Course - 1981

Materials - English

Jacobson, J., and Maccoll, P., Real Life Reading, Ashton Scholastics, Sydney, 1978.

Various situations from everyday living are presented with a variety of exercises for the practice of necessary written, aural, and spoken skills. Topics include "following directions," reading, and filling in forms and applications, "being a consumer." Set out in a readable manner and usually interesting it included multiple choice questions which students answered with a relatively high degree of success.

Endeavour Reading Programme - Read and Learn Activity Cards, Stages 10-12.

A self-pacing individualized programme of comprehension exercises and answer cards aimed at the 12-15 year old interest level and 10-12 year reading ages.

SRA - International Reading Lab III(a)

Consists of cards with short passages and multiple choice questions following. Answer cards provide students with a checking system and opportunity to gauge their own progress. The interest level is aimed at a 15-year old and a range of 10-15 years in reading ages.

Topliner and Heinemann Series of Novels

Action-packed short novels with a high interest level for adolescent readers. Stories are about young people and easy to read.

Trend Series of Novels

A manageable size for slow readers - easy to read, short action-packed stories for adolescents. The series is graded in difficulty and students move successfully from one level to the next attaining a sense of achievement.

Transit Series 3 and 4; Learning English in Australian Schools, Commonwealth Department of Education, Canberra, A.C.T.

Two separate series of readers and workbooks designed for secondary school students of non-English speaking background and also suitable for students with low reading ages. Stories are a high interest level and easy vocabulary. Individual copies of workbooks are supplied to students allowing for individualized work and self-pacing.

Origins Kit - Commonwealth Department of Education, Canberra, A.C.T.

Activity cards and work sheets graded from low reading age to a higher level covering interesting topics from Australia's past - eg. "Bushrangers," "Gold," "Pioneers." Includes a variety of activities eg. aural activities, drama, writing and speaking skills.

Life Skills Language Kit

A series of graded cards at four different levels covering topics necessary for everyday living eg. "Reading A Timetable," "Reading A Street Directory," "Filling in Forms," and so on. Students work individually at own pace and gauge their progress from the answer cards then move on to a more difficult level when success is attained. Sense of achievement level is high as cards are short and concise.

English at Work

For the more advanced students this book offers challenging exercises in reading comprehension at a high interest level. Passages are followed by exercises covering important grammatical points and require teacher supervision for correction of work.

Walters, B., Groundwork in Plain English, John Wiley and Sons Pty Ltd, Sydney, 1974.

For the student of average abiiity, various passages with interesting exercises following. Needs teacher supervision for correction of answers and guidance of student's progress. Interest in passages needs to be monitored by the teacher for maximum benefit to be gained from exercises.

Jennaway, L., Reading is Easy, Book 2, McGraw-Hill, Sydney, 1980.

A book of graded passages and exercises for students of low to average reading ability. Stories have a high interest level and need teacher supervision in correction of exercises and guidance for further work.

Materials - Maths

Franklin, Preece, Grunsut, Modified Mathematics, Book 1, Book 2, Book 3, Book 4. Macarthur Press, Sapphire Books, Sydney, 1977.

Series covers the basic mathematical functions and increases in difficulty in successive books. Topics such as addition, subtraction, multiplication, division, length and area, geometry, and equations. Answers supplied in back of book - individualized work programmes set by teachers can be worked on at student's own pace and checked by student.

Thompson, A. and Wrightson, E., Developmental Mathematics, Books 3 & 4. McGraw Hill and Co., Sydney, 1976.

A graded series of mathematical topics including answers for student's self-correction. Aimed at the average and above average student of mathematics, includes topics in hire purchase, trigonometry, measurement and indices.

S.M.P. Mathematics - Red Series; and SMP Mathematics - Green Series.

Two boxes of activity cards graded in difficulty for students of below average mathematics ability. Answer cards included. Aimed at individual work programmes. Students work at their own pace towards the next level. High sense of success as cards have short exercises.

APPENDIX IX

STUDENTS' COMMENTS ON ASPIRATIONS AND ACHIEVEMENTS

In order to assess the student's motivation for attendance and initial commitment to the aims and objectives of the programme students were asked within the first hour of arrival to write down in any form they wished their reasons for coming to the programme.

On the final day they were asked to write down (again, in any form they wished) what they felt they had gained from the course. To minimise any reluctance in revealing their real attitudes they were permitted to leave their paper anonymous if preferred. A set time was not alloted and students were asked to fit their writing in between the administration of the various tests.

What students wrote on Time 1 and Time 2 have been matched up and recorded in this appendix.

(It is presented for visual evaluation only and forms an interesting comparison for each student.)

(Unfortunately 3 students were not available to complete the T_2 comments.)

71

72 Born 44 N.

72

I enjoyed the place because ever were allowed to do what we liked to do like making a ~~bad~~ ~~mess~~ ~~when~~ I called my parents and ~~when~~ I could not do something ~~her~~ help me if got it, I went for it like your ~~cooking~~ and machine And they let me. ~~or~~ ~~th~~ did, not understood is that ~~we~~ were not allowed to bring our ~~bikes~~

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T1 I hopeto improve my English and go to Snowy Mountains and go abseiling and bring up my bike so I can ride

Eugene

T2

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I like went we went at with Dave to the telecommon tower and jerry with when to the movies.

Then best person was Dave, I reckon because he understood us.

I have learn a far bit in English and Maths

T1

Joe

I want to get much better grades than I have been getting. I would like very much to improve in Maths and English. Also in my other subjects as well. I really think that I can benefit from this course. I also want to go to the snow and do all the other activities.

T2 What I have enjoyed the most is the way the people treat you up here and also the friendship they give you. I also liked about coming up here is that I have seen the true side of myself and my friends also. I like the area where we are because you are not be destracted from doing your work. We all like the way this place has been built and the way they take care of it.

I also like the way they look after they area and how they keep it clean and healthy. The best thing I like about this place is that I have learned

T1

I down here for to prove my ~~Eat~~ English and my Math ~~Read~~

T2

Peter.

P. 132

The good time when I went to Canberra with friend and David. The first place went to Black Mountain and went in the telecom tower. The second place we went is the War Memorial and we got sick out. And we went to Canberra Airport. And other good is we went Roll skating in Canberra it ~~we~~ was a lot of fun.

~~The one thing I like this~~

I like place because when are down Sydney when you working you forget thing a lot and you up here you don't forget

T1

Tony.

I wanted like To ~~the down~~ learn maths and english and a few ~~like~~ things about the bush

T2

I learnt how to live in the bush for a couple of days. I learnt how to cook, wash my own clothes and how to put up tarps and tents. I learnt how to Rockclimb abseil and how to belay. I found out that snow isn't as soft as it looks. I learnt now to read a lot better. I learnt how to do the ropes course. I learnt how to live with different people. I ~~at~~ only knew 2 people when I first came but now I know everyone and they are

T1

To improve on my maths and english.
have fun by bush walking, swimming - also sailing
playing games - canoeing - cycling - camping and
by jump to the town etc

Marc

T2

P.133,

I have learnt how to cook, clean my
service in the bush I learnt how
to live with other people learnt
about the, snow and river
and Rock climbing and to-
pography and the map
coz really I learnt, Maths
and English to use Maps
and Gradients doesn't there
and Gradients and compass
also toilet and how to
respect myself.

Stephen S.

T1

I want more Math & English, more
than school work. Plus to get away
for sometime

T2

I think I change a little bit over the
past 6 wheeks. I see myself in other
people and how they treat me. some treet
me really good but some just treet me
bad that they get me ~~made~~ angry

And I have learnt things that I

BEST COPY AVAILAB

To understand my maths, and English and to be able to ~~get~~ do Do things for myself

T1 I would like to go on excursions, and rock-climbing.

Fabian

T2

P. 134

I liked the Day we went with dave to the War memorial and other places around Canberra. He was really good to us. all of us who went had the time of our lives that day.

We got kicked out of everyplace we went, no this dave, he really understood what ~~me~~ it is fair to be a teenager, and understands you real well.

I like being with the group because we learned a lot of each other and how we act.

Abdullah

To understand my Maths and English.

T1

go down to town.

Go to rock climbing

T2

Abdullah

In last 6 weeks we enjoyed I self
We go out to Town to the moves and rollerding
ski etc
we all had fun go out in the bush and
looking around Tharwa bush.
and I did not no Gary very well but now
I no him very well and with the other kids
We have fun together talk to each others
play game together. and do maths and English together.

Outward Bound Bridging Course - 1981

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